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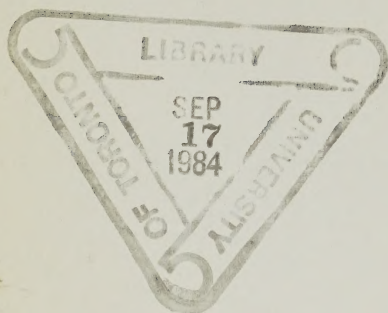


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The Annual Handbook
of present conditions
and recent progress

Prepared in the
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preface

Canada 1976 is the 45th edition of the Handbook *Canada*. It presents a view of life in this country and a summary of recent social, cultural and economic developments. Textual and statistical material has been provided by various divisions of Statistics Canada, by other government departments and by special contributors. Articles on Canada's geography, history, arts and culture, religion, scientific activities, and recreation and tourism are features of this edition. The illustrations have been selected from a wide range of governmental, commercial, press and private sources.

Canada 1976 was planned and produced by Margaret Johnstone, Acting Editor, and the Year Book Section staff, under the direction of Hélène Brodeur-St. James, Assistant Director (Publishing), Information Division.



Peter G. Kirkham
Chief Statistician of Canada

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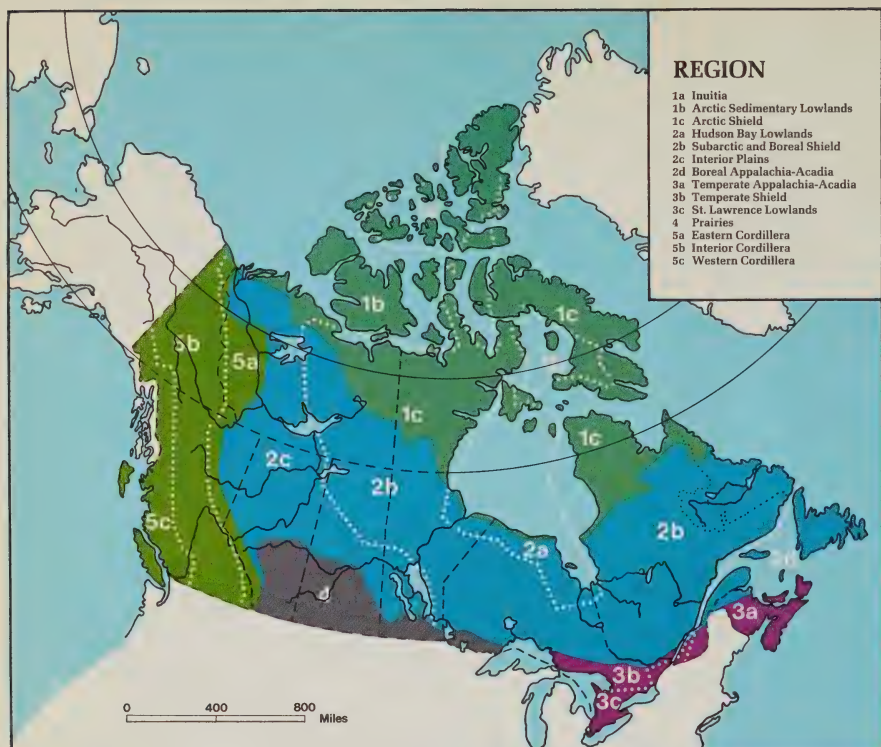
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the land and the environment

The Physical Geography of Canada

Canada is the second largest country in the world with an area of 3,852,000 square miles, but the over-all pattern of relief is simple. The interior of the country is a plain-like surface bounded on the east, west and north by a highland rim but open to our American neighbours to the south. This low relief area is 2,000 miles wide at its widest in the south and narrows to about 1,000 miles in the north. On the western side, the Cordilleran region is an almost unbroken mountain chain extending from the American border to the Beaufort Sea. On the eastern side, the Appalachian Mountain system forms the Atlantic Provinces. On the northern side, the Torngat Mountains of Labrador and the Baffin, Axel Heiberg and Ellesmere Island mountains form a more broken barrier.

In any analysis of Canada's physical geography the fact that up to 97 per cent of its surface has been repeatedly covered by glacier ice within the last million years is of fundamental importance in that the surface features of both mountains and plains have been extensively modified. Only the central part of the Yukon Territory and minor parts of the Northwest Territories escaped glaciation. About 2 per cent of Canada is still covered by glacier ice, but its distribution is so restricted that



probably two thirds of the Inuit (Eskimo) population, for example, has never seen a glacier. About 60,000 square miles of ice remain in the Arctic islands and 20,000 square miles remain on the mainland.

Four major vegetation zones and five major landform regions of Canada are used as a basis for the discussion that follows. In general the vegetation zones provide a convenient basis for regional description; only in the case of the Cordilleran region are landforms considered more useful for this purpose. Accordingly, the regions are described under the five major headings of (1) The Arctic Tundra; (2) The Subarctic Parkland and Boreal Forest; (3) The Eastern Temperate Forest; (4) The Prairies; and (5) The Cordillera. Sub-regions of these regions are defined on the basis of physiographic considerations.

1. The Arctic Tundra Region

The Arctic Tundra corresponds closely to that region which lies north of the southern limit of continuous permafrost. Permafrost is the thermal condition in earth materials that remain below 0°C for several years. Problems connected with building and highway construction, sewage disposal, water supply and hot-oil pipelines are magnified in such a region and as a result much attention has recently been directed to these problems. Approximately 26 per cent of the land surface of the world is underlain by permafrost, so it is not merely a local problem. The tundra vegetation that is characteristic of this region shows considerable variety, and is discussed under each sub-region.

(a) The Inuitian Sub-region (146,000 square miles)

This is the northernmost part of Canada, north of Parry Channel (74°N). Included are Ellesmere, Axel Heiberg, Parry and Queen Elizabeth islands. One third of Ellesmere and Axel Heiberg are covered with ice (about 37,000 square miles) and this includes 12 ice caps each with an area of more than 1,000 square miles. Local relief up to 4,000 feet and highest summits around 8,200 feet provide the setting for some of the harshest environments on earth. In this high Arctic polar desert, vegetation may be completely absent except for crustaceous lichens. "In its variety, its aridity and its glaciers, and above all its potential for petroleum development, it is perhaps the most fascinating of all the regions of northern Canada."¹

(b) Arctic Sedimentary Lowlands Sub-region (158,000 square miles)

Included in this category are most of the Arctic islands south of Parry Channel, such as Banks, Victoria, Prince of Wales, Somerset and Southampton islands; low-lying parts of Devon, Ellesmere and Baffin islands; and the Arctic Coastal Plain, including the Mackenzie River Delta. They form low coastal plains and plateaus underlain by horizontally bedded sedimentary strata covered by a variable depth of drift sediments or, in the case of the Mackenzie Delta, fluvial sediments.

¹J.B. Bird in W.C. Wonders, *The North* (Toronto, 1972), p 24.

Swirls of virgin snow cover the peaks of the Osborne Range of Ellesmere Island, NWT.



Although underlain by continuous permafrost, the land surface shows a markedly richer tundra vegetation than the Inuitian sub-region. Lichen moss tundra, including reindeer moss in the drier sites and wet tundra with grasses and sedges, provide an almost continuous vegetation cover. The Mackenzie Delta has an exceptionally rich vegetation including stands of white and black spruce on the higher parts of stable river island bars. Rock deserts and peat-covered tundra plains are also present and are especially well developed on Southampton, Coats and Mansel islands in Hudson Bay.

Of particular interest in this sub-region are the distinctive landforms that have developed under the influence of periglacial processes. Spectacular conical shaped hills called pingos develop in drained lake bottoms along the Arctic coastal plain; polygonal patterned ground is common; mounds, hollows and mud circles are widespread; and solifluction terraces — resulting from the saturation of the soils and frost action—are here classically developed. All this over a depth of permafrost that reaches 1,300 feet in the delta and 1,600 feet on the islands; also on massive layers of ice up to 100 feet thick.

(c) Arctic Shield Sub-region (545,000 square miles)

Included in this part of the Arctic tundra are 20 per cent of the Mackenzie District, 80 per cent of the Keewatin District, 35 per cent of the Franklin District (including most of Baffin Island) — all in the Northwest Territories — and 15 per cent of Quebec. At least two rather distinct landscapes are evident. There is the spectacular eastern highland rim which includes the southeastern corner of Ellesmere Island, the eastern end of Devon Island, Bylot Island, eastern Baffin Island and the Torngat Mountains of Quebec, with local relief in the Baffin fiords as high as 6,000 feet. Some of the most remarkable glaciated erosional topography of the North American continent is found on Baffin Island's east coast. The remainder of the sub-region is commonly known as Canada's Barren Grounds, and is characterized by uplands, hills and rocky lowlands.

The most luxuriant tundra vegetation known as bush tundra, with willow and alder bushes and dense undergrowth, occurs locally in the Barren Grounds, especially on the south side of Amundsen and Coronation gulfs. Wet tundra is more common in the eastern part of the sub-region where the environment is generally more humid. While the eastern rim may have long periods of cold, cloudy, damp weather in summer, the western shield has weeks of warm, dry, cloudless weather.

In spite of this poor climate the fiord lands of Baffin Island support the widest variety of arctic ecosystems. Cliffs and talus slopes, gravel outwash plains, coastal sedge and grass marshes, and permanent ice caps, in addition to the standard wet tundra, give variety to the landscape.

2. The Subarctic Parkland and Boreal Forest Region

This is a region underlain by discontinuous permafrost in the north and then totally free of permafrost in the south. It cuts a swath through Mackenzie, western Keewatin, northeastern British Columbia, northern Alberta and Saskatchewan, almost the whole of Manitoba, Ontario, Quebec and Newfoundland. The distinctive



Streams of light from the midnight sun illuminate the ice patterns of Greely Fiord, NWT.

zones of vegetation which give character to this region are discussed under the Shield sub-region.

(a) Hudson Bay Lowland Sub-region (117,000 square miles)

Although continuous permafrost is present in the narrow strip along the Hudson Bay coast where the mean annual air temperature is less than -4°C , the significant change that characterizes this sub-region compared with those areas discussed above is that some areas of it do not have permafrost. In the southernmost part of the lowland there is no permafrost at all; at the southern fringe of the discontinuous permafrost zone ($53^{\frac{1}{2}}\text{N}$ is the southernmost occurrence of permafrost in Canada outside the Cordillera), permafrost islands vary from less than 50 feet to several acres in extent and a few inches to two feet in depth. At Churchill the permafrost is continuous and 200 feet deep.

Physiographic uniformity derives from horizontally bedded sedimentary strata covered by a varying depth of drift, but this sub-region contrasts with the surrounding Shield sub-region most markedly in the nearly universal presence of organic terrain and the absence of bedrock outcrops.

Scattered to dense spruce stands, two to 40 feet in height, and tamarack are dominant. Alder and willow form the undergrowth. Sphagnum, feather and other mosses; Labrador tea; grass; and marsh sedge form the ground vegetation.

Microrelief of hummocks, peat plateaus and palsas up to 20 feet in height is characteristic. It is estimated that peat is accumulating at a rate of one inch every 20 years.



Sunset near Baie Comeau, Que.

(b) Subarctic and Boreal Shield Sub-region (1,295,000 square miles)

Covering 40 per cent of Mackenzie, 10 per cent of Keewatin, 35 per cent of Saskatchewan, 60 per cent of Manitoba, 80 per cent of Quebec and 55 per cent of Ontario, this represents the largest single sub-region described. The Precambrian bedrock of the Shield gives subdued relief, and extensive drift areas are preserved. Fluvioglacial deposits in the form of eskers are particularly well expressed in the Keewatin and eastern Mackenzie districts. Another noteworthy feature is the recentness of the massive post-glacial uplift of land such that, for example, on the east side of Hudson Bay post-glacial marine features are found as high as 900 feet above the present sea level.

Three major vegetation associations occur in this sub-region: the forest-tundra, the northern woodland and the closed boreal forest (or Canadian forest). The major part of the sub-region is underlain by discontinuous permafrost.

The forest-tundra zone varies from 30 miles wide in Mackenzie to 100 miles wide in Keewatin and Quebec. Islands or strips of white or black spruce or (in Quebec) larch are restricted to sheltered areas but become progressively more dominant southwards.

The northern woodland zone has the appearance of an open parkland and is best developed in Quebec where widely separate candelabra spruce stand on a deep lichen floor. Along the banks of the major rivers and in sheltered areas, full boreal forest is developed.

The boreal forest of spruce, fir, larch, hemlock and pine extends across the whole of Canada from Newfoundland to British Columbia. The eastern half of this zone

has a smaller number of species than the western half, but there is remarkable similarity in over-all structure.

The clay belts of the Shield (especially the great clay belt of Ontario) stand out because of the general absence of rock outcrop and because agricultural development is leading to extensive modification of the boreal forest.

(c) Interior Plains Sub-region (571,000 square miles)

This sub-region covers 25 per cent of Mackenzie, 10 per cent of British Columbia, 80 per cent of Alberta, 30 per cent of Saskatchewan and 30 per cent of Manitoba. With the same three major vegetation associations as the Shield immediately to the east, the major difference between the Interior Plains and the Shield lies in its physiography. Major hills, plateaus and escarpments are formed by outcrops of gently dipping sedimentary rocks (limestone, sandstone and shale) which contrast with the Precambrian rocks of the Shield. On the other hand, the details of the landscape are a product of glaciation and particularly extensive areas are occupied by meltwater channels from proglacial lakes, and by much lake-bed materials. The sub-region is about 600 miles wide in the south. It narrows to 200 miles wide east of the Franklin Mountains, and widens to 500 miles again in Western Mackenzie. The scenery consists of wide vistas of undulating plains, the occasional valley cut deep below the general surface and the distant lines of hills and escarpment.

The summit of Mount Revelstoke, BC.



There are no mountain barriers to provide protection from cold air moving south from the Arctic or from warm air from the Gulf of Mexico. Consequently the widest variation of temperature between summer and winter tends to occur and day-to-day changes are frequent. Those areas within 100 miles or so of the Rocky Mountain foothills experience Chinook winds that can raise temperatures from -29°C to $+2^{\circ}\text{C}$ in a few hours.

(d) The Boreal Appalachian – Acadian Sub-region (60,000 square miles)

This area includes Newfoundland and the Gaspé Peninsula of Quebec. It is moderately rugged country reaching its highest elevation of over 4,000 feet in the Shickshock Mountains of the Gaspé. Newfoundland has an extremely varied physiography and as a result there are considerable limitations to agriculture. About half the province is classified as bedrock outcrop or thinly mantled with stony till; one quarter is classified as ground moraine; one tenth is end moraine; one tenth is organic terrain or sphagnum peat in morainic depressions; the remaining 5 per cent is glaciofluvial, marine sediment and recent alluvium, which has some agricultural potential.

3. The Eastern Temperate Forest Region

The eastern temperate forest includes a deciduous forest zone in southwestern Ontario, a Great Lakes – St. Lawrence forest zone north and northeast of the deciduous forest, and an Acadian forest zone characteristic of the Maritime Provinces. Although there are conifers in this region, deciduous trees are progressively more important toward the southwest.

Fertile farmlands of Prince Edward Island.





The mosaic splendour of fall foliage at Lac Ouimet, Que.

(a) Temperate Appalachian – Acadian Sub-region (81,000 square miles)

This area includes the Eastern Townships of Quebec, New Brunswick, Nova Scotia and Prince Edward Island. The uplands are arranged in two linear belts — one across southern New Brunswick and northern Nova Scotia and the other over peninsular Nova Scotia and Cape Breton Island. Further, the Eastern Townships are located on the Eastern Quebec uplands, a southwesterly extension of the Notre Dame Mountains. The Acadian forest zone is most typical here. Red spruce, balsam fir, yellow birch, sugar maple and beech are common. Also present is the Great Lakes –St. Lawrence forest with red and white pine, eastern hemlock, yellow birch, sugar maple, red oak, basswood and white elm.

(b) Temperate Shield Sub-region (62,000 square miles)

Fifteen per cent of Ontario, between Sault Ste Marie and Ottawa, including Sudbury, North Bay and Algonquin Park, is dominated by sugar maple, aspen, yellow birch, hemlock and red and white pine (Great Lakes –St. Lawrence forest). This Shield area, with its protruding rock knobs and intervening pockets of sand, silt and clay is primarily a forested area. With the varying combination of trees, lakes, rivers, hills and animal life, located conveniently close to the major urban centres of Canada and the northeastern US, it is a favourite recreational area.

(c) St. Lawrence Lowlands Sub-region (70,000 square miles)

Ten per cent of Ontario and 5 per cent of Quebec are included in this small sub-region. It contains Canada's two largest cities, Toronto and Montreal, and the St. Lawrence Seaway connects the heart of Canada to the Atlantic Ocean. Located between the Appalachians and the Shield, these lowlands are formed of very gently dipping Palaeozoic sedimentary rocks. West of the Thousand Islands they are 150 miles wide; east they are never more than 75 miles wide. Most of the land is undulating and less than 500 feet above sea level, but in the Bruce Peninsula, above the Niagara Escarpment, the plain reaches 1,800 feet. In detail, the lowland has a varied terrain that has been investigated more comprehensively than any other landform region of Canada. Glacial depositional features predominate. Till plains are extensive, and there are recurring end moraines, drumlins, clay plains and sand plains. Beech-maple forest is the dominant vegetation with admixtures of white oak, hickory, walnut, basswood and black cherry. In terms of heat and sunshine or growing days a year the southwestern corner is by far the most favourable area for agriculture in Canada. The presence of deciduous forest is evidence of that preferred environment. The influence of the Great Lakes reduces the range in temperature from winter to summer by as much as 15° compared with parts of Minnesota in equivalent latitudes.

The frosty glimmer of sunrise illuminates ice-coated silhouettes along the Grand River, near Kitchener, Ont.





The prairies of Saskatchewan.

4. The Prairie Region (130,000 square miles)

Ten per cent of Alberta, 35 per cent of Saskatchewan, and 5 per cent of Manitoba form a southern extension of the Interior Lowlands, discussed earlier. The distinctiveness of this region lies in the absence of forest vegetation in the so-called Canadian Grassland and the associated aspen parkland immediately to the north. Most of the primeval grassland (needlegrass, gramagrass, wheat grass, dropseed and fescue) has been ploughed.

Tall, short, and mixed grass prairie form the core of the region. The tall grass prairie, typical of the Lake Agassiz plain west of Red River, Man., is the result of an abundant supply of moisture. The short grass prairie (notably blue grama, June grass, wheat grass and spear grasses) has a moisture deficit of 8 to 12 inches. But there are many complex associations relating to particular drainage, soil and topographic conditions. The mixed grass prairie has a denser, taller and more diverse cover. It is transitional between both long and short grass prairie to parkland.

The parkland areas are a mixture of grassland and woodland cover. Aspen poplar predominates in most parkland groves but bur oak and other Great Lakes Forest species are present in Manitoba, and various mountain and subalpine species occur in the Rocky Mountain Foothills.

Hummocky moraine, end moraine, ground moraine and lake beds are the major landform features. Some semi-arid areas occur in southern Alberta and southwestern Saskatchewan. A number of badland areas have developed in Alberta where spectacular surface erosion has occurred.

5. The Cordilleran Region

The Cordilleran region is part of one of the major mountain systems of the world. Five of the eight major forest zones of Canada (not to mention the Alpine tundra zone) are represented: the boreal, subalpine, montane, coast and Columbia forest zones. The boreal forest zone has already been described and is well developed in the Cordillera in northern British Columbia, southern Yukon Territory and southern Mackenzie territory. The subalpine forest is a coniferous forest found on the higher slopes of the mountains east of the Coast Mountains. Typical species are Engelmann spruce, alpine fir and lodgepole pine. The montane forest, with Ponderosa pine, Douglas fir, lodgepole pine, aspen (in the north) and sagebrush (in the southern valleys), is extensive in the interior plateau of British Columbia and a small area on the east side of the Rockies. The Columbia forest is characteristic of the southeastern part of the interior system of British Columbia, with western red cedar and western hemlock the typical trees. Finally the coast forest, on the west-facing slopes of the Coast Mountains and the western islands, is the finest forest in Canada. Towering stands of western red cedar, western hemlock, Douglas fir (south) and Sitka spruce (north) are extensively exploited commercially.

(a) Eastern Sub-region (177,000 square miles)

This area is 60 per cent rugged mountains (Mackenzie, Richardson and Rocky mountains), 30 per cent plateaus and foothills (Porcupine and Liard plateaus and Rocky Mountain Foothills) and 10 per cent plains (Old Crow, Eagle and Mackenzie plains). The highest peak is Mt. Robson at 12,972 feet. One of the most characteristic features of this landscape is the impressive cliffs in near-horizontally bedded sedimentary strata, which have been carved by glaciation. The Rockies are seldom more than 60 miles wide but together with the Mackenzie and Richardson mountains they form an almost continuous series of ranges from the 49th parallel to the Arctic.

A complex succession of vegetation zones occurs with elevation. Above the boreal forest is a sub-alpine parkland and above this, a dense scrub where stunted spruces and pines are common. Beyond this timberline, alpine tundra, moss campion, saxifrage, sandworts, sedges and bilberries are common. Summer days are warmer than in the Arctic, soils are deeper and vegetation is lusher than its Arctic equivalent.

(b) Interior Sub-region (317,000 square miles)

Approximately 55 per cent are plateaus (Interior, Stikine, Hyland and Yukon), 40 per cent true mountains (British, Ogilvie, Selwyn, Cassiar, Omineca, Skeena, Hazelton and Columbia) and 5 per cent lowlands (Rocky Mountains, Tintina and Shawkak trenches). This extremely complex region is characterized by lesser local relief and a drier climate than the surrounding mountains. A considerable number of the peaks of the Columbia Mountains exceed 10,000 feet. The interior plateau ranges from 2,000 to 5,000 feet in elevation with local relief from 300 to 500 feet and deeply entrenched valleys to 3,000 feet deep. The plateau is narrowest and highest in the south where it narrows to less than 30 miles between the Cascade and



1

1. Montmorency Falls, near Quebec City, Que.
2. Athabasca Falls in Jasper National Park, Alta.
3. Niagara Falls.



2



3



The curling path of the Kootenay River winding through the fertile flats near Creston, BC.

Monashee mountains. It broadens to 200 miles in the Nechako—Prince George area. Here the plateau is lower, the valleys are less deeply incised and low hills form the scenery. There is also a change in vegetation from the mixed forests in the north to the mountain woodland, grassland and arid sagebrush country to the south.

(c) Western Sub-region (121,000 square miles)

The Western System is formed of massive plutonic rock bodies or, less commonly, by volcanic and folded sedimentary strata, intruded by scattered plutons, all of which have produced high relief, high altitude terrain. These plutons are masses of coarse-grained igneous rock, such as, for example, granite.

Longitudinally, the System is divided into three: the Coast Mountains of the mainland, the outer mountains forming the Queen Charlotte and Vancouver islands and the St. Elias Mountains, and between the three a series of lowlands. The Coast Mountains and the St. Elias Mountains contain the bulk of the 20,000 square miles of glacier ice on the Canadian mainland. Mt. Waddington, over 13,000 feet, is the highest peak in the Coast Mountains and Mt. Logan at 19,850 feet is the highest in the St. Elias Mountains. Along the coast for nearly 1,500 miles from Vancouver to Alaska there are major fiords.

The treeline declines from 6,000 feet on Vancouver Island to 3,000 feet in the northern Coast Mountains. Over the same distance the level of glacier snouts declines from 7,800 feet to sea level. This means that in the northern Coast Mountains, glaciers and forests are juxtaposed. The heavy snow accumulation is perhaps the most distinctive hydrologic feature of this sub-region.

OLAV SLAYMAKER

Recreation and Tourist Seasons and Canada's Climate

Recreation and tourism are gaining importance in Canada due to shorter work-weeks, longer vacations, increasing affluence and a growing awareness of our natural environment. Weather, in all its varied aspects plays a vital part in the value of any recreation or touring experience. Among the countries of the world, Canada is in a unique position, offering the tourist an immense variety of climatic patterns from which he can pick suitable recreation, both in winter and summer. The distribution of length patterns of the recreation and tourist seasons across the country is, therefore, of concern to both Canadians and tourists.

Although recreational pursuits vary somewhat from region to region across the country in any one season, there are two main recreation and tourist seasons across virtually all of Canada. Winter is essentially the season of snow- and ice-cover activities and summer the season of dry-terrain and water pursuits. Landscape touring by automobile is considered a year-round activity, although its emphasis lies in the summer months.

The summer season can be conveniently divided into three periods. The warmest part of the season, high summer, is suitable for most water-based activities, and is bordered by two cooler periods, spring shoulder and autumn shoulder, which are ideal for vigorous pursuits such as hiking and sports. The spring thaw separates winter from the spring shoulder of the summer season. During this thaw period most activities come to a halt because the frost is coming out of the ground. Waterways are partially covered with ice, and the spring freshet occurs, with possible flooding in some areas.

While winter has been defined on the basis of the snow-cover period (from the median dates of the first and last one-inch cover), the snow cover is unreliable over both the beginning and ending periods of the season. The length of period within

Canada's seasonal patterns

Season or period	Definition
Winter.....	Begins on median date of first snow cover of one inch or more. Terminates on median date of last snow cover of one inch or more.
Spring thaw.....	A two-week period following the termination of winter.
Spring shoulder	Begins with the termination of the spring thaw. Terminates with the start of high summer.
High summer	Begins on date that the mean daily maximum temperature rises above 18°C. Terminates on date that the mean daily maximum temperature falls below 18°C.
Autumn shoulder	Begins with the termination of high summer. Terminates with the onset of winter.

the winter season with sufficiently reliable snow- and ice-cover for winter activities such as skiing, snowmobiling and ice fishing, is considerably shorter than the total length of the winter season.

In the following table, the beginning and ending dates and lengths of the various recreation and tourist seasons and periods are tabulated for a number of Canadian localities. The complete summer season encompasses the spring shoulder, high summer and autumn shoulder. Much of northern Canada has no high summer, with mean daily maximum temperature never reaching 18°C at any time during the summer season. This area of no high summer is shown on the accompanying map. The area of the country where summer is longer than winter is also indicated on the map. Over all of the North winter is longer than summer.

Regional Patterns of the Recreation and Tourist Seasons

British Columbia Coast

Along the Pacific Coast, summer is invariably much longer than winter, the former season lasting generally from 200 to 320 days and the latter, 40 to 100 days. The shortest winters and longest summers in Canada are found along the west coast of Vancouver Island. At the ends of long fiords, at localities inland from the coast and at higher elevations, there is a pronounced increase in the length of winter and a corresponding shortening of the complete summer season. The length of high

Radium Hot Springs in Kootenay National Park, BC.





Skiers reach isolated summits by helicopter near Golden, BC.

summer, or warm-weather period, is highly dependent on proximity to the coast. Along the west coast of Vancouver Island, the north mainland coast and over most of the Queen Charlotte Islands, although the complete summer season is very long, there is no high summer due to the influence of relatively cool waters of the Pacific Ocean. At the ends of long fiords and at localities inland from the coast, although the complete summer season is somewhat shorter, there is a significant high-summer period due to the lessening oceanic influence. The high-summer period reaches 140 days along the eastern coastal plain of Vancouver Island and in the lower Fraser River valley. This period decreases somewhat with elevation.

Interior British Columbia

Seasonal length patterns in the interior of British Columbia are extremely complex, mainly due to the varied terrain. In the valleys of the southern interior, summer is considerably longer than winter, but the reverse is true over northern valleys of the province. The length of the summer season ranges from 260 days over the most southern interior valleys to as few as 140 days over much of the northern interior. The latitudinal decrease from south to north is very pronounced. Length of the winter season ranges from as few as 100 days over some southern interior valleys to as many as 200 days in the northern interior. With increasing elevation, the length of winter increases sharply. The length of high summer in southern British Columbia valleys is generally well over 100 days, with the longest values in Canada occurring over the extreme southern Okanagan Valley, over 160 days. The length of high summer decreases rapidly with both elevation and latitude, a large area of the northern BC interior having less than 60 days.

The Prairie Provinces

Over most of the southern Prairies, summer is longer than winter. The reverse is true over northern regions and in the foothills of the Rockies and the Cypress Hills. Winter is less than 160 days long over the Assiniboine River valley and the southern Red River valley of Manitoba, and over part of the South Saskatchewan River valley, southeastern Alberta and southwestern Saskatchewan. Winter lasts between 160 and 200 days over most of the remainder of the Prairies except for longer values over higher elevations of the foothills of the Rockies and over extreme northeastern Saskatchewan and northern Manitoba. Summer lasts more than 180 days over most of southeastern Alberta, southern Saskatchewan and southern Manitoba. Summer lengths decrease with latitude and elevation. Higher elevations of the foothills of the Rockies have summers less than 140 days long, as do extreme northern Saskatchewan and northern Manitoba. High summers last more than 100 days over most of the populated southern sections of the Prairies, with a large part of southern Alberta, southern Saskatchewan and the extreme southern Red River valley of Manitoba having more than 120 days. High-summer lengths decrease rapidly with elevation and latitude. Along the Hudson Bay coast of Manitoba there is no high summer.

Ontario

Winter is longer than summer over practically all of Ontario north of Lake Superior. Over the southern half of the province, summer is much longer than winter. Winter averages between 170 and 230 days over northern Ontario, with the highest values occurring along the Hudson Bay coast. Over southern Ontario the number of days of winter ranges from about 160 at the latitude of Sault Ste Marie and Sudbury to less than 120 at Windsor. The complete summer season over northern Ontario ranges in length from about 130 days along the Hudson Bay shore

Tulip beds in Ottawa, Ont.





Touring by sleigh near Montebello, Que.

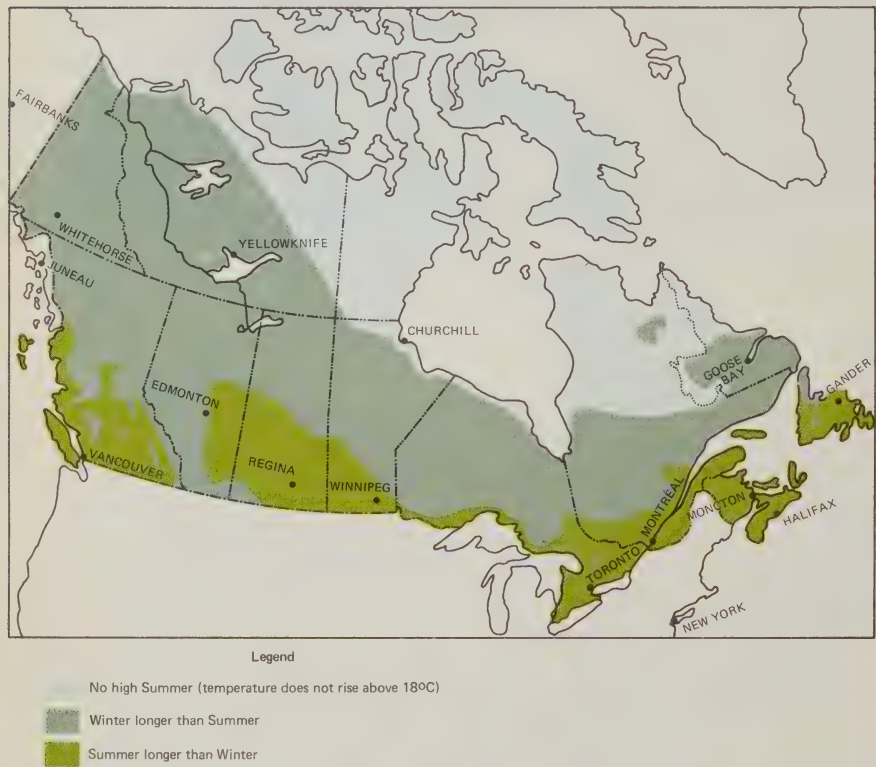
to 180 days just north of Lake Superior. Over the southern half of the province the summer varies only slightly from about 190 days at the latitude of Sault Ste Marie and Sudbury to about 230 days at Windsor. There is no high summer over those parts of the province adjacent to Hudson Bay or the islands of Lake Superior. Over northern Ontario, generally less than 100 days of high summer occur, but over the south, as many as 140 days occur inland from the Great Lakes.

Quebec

Over all of southern Quebec summer is longer than winter, but north of the latitude of Rouyn and La Tuque the reverse is generally true. As an exception, summers are longer than winter all along the north shore of the St. Lawrence River as far as Tadoussac, including the lower Saguenay River, and along the south shore of the St. Lawrence, including the lower elevations of the Gaspé peninsula and

Anticosti Island. Winters are as short as 140 days over extreme southern Quebec, but lengths increase rapidly with latitude, the far northern part of the province having about 240 days. Winters are also longer over the higher elevation; the Gaspé peninsula stands out in this regard. Summer-season lengths range from about 200 days over extreme southern Quebec to 100 days over the northern Ungava peninsula. The lengths of summer decrease with increasing latitude and elevation. There is no high summer over most of the Ungava peninsula, although it does occur for a short period over a small area in the valleys of the Kaniapiskau and George rivers. South of the latitude of southern James Bay, the lengths of high summer increase rapidly with decreasing latitude, lasting as long as 130 days over extreme southern parts of the province. The lengths also decrease with increasing elevation, such as over the Gaspé peninsula.

Summer and Winter Recreational Periods





Hiking in the Gatineau area of Quebec.

The Maritimes

Except over the higher elevations of northern New Brunswick, summer is considerably longer than winter over all of the Maritimes. In New Brunswick, winter ranges from over 160 days in length over the northern highlands to about 120 days over the Bay of Fundy coast. Winter lasts more than 140 days over most of Prince Edward Island. Winter lengths vary considerably over Nova Scotia, inland and highland regions generally having 130 days or more and coastal localities considerably less. Winters are as short as 100 days over the extreme southern part of Nova Scotia. The complete summer season ranges from about 220 days or more along the Atlantic Coast of Nova Scotia to less than 180 days over the higher elevations of northern New Brunswick. High summers are very short or non-existent along some of the exposed outer Atlantic and Bay of Fundy coasts of Nova Scotia. Inland over the Maritimes, high summers are as long as 100 days at many localities.

Island of Newfoundland

Summer is longer than winter over most of Newfoundland, but the reverse is true over the higher elevations of the Long Range Mountains, over the western part of the island and most of the northern peninsula. Winter lengths range from less than 140 days over most of the Avalon Peninsula and along the south shore to 180 days or more over the Long Range Mountains and the northern peninsula. Complete summer lengths are greatest over the Avalon Peninsula and along the south shore, where 200 days or more can be expected. Summer lengths decrease with increasing elevation and latitude, the Long Range Mountains of the northern peninsula having less than 160 days. Some coastal communities of Newfoundland have no high summer. Inland, high-summer lengths increase rapidly with distance from the coast, with some parts having as many as 80 days.

Labrador

Winter is longer than summer over all of Labrador. Winter lengths range from less than 200 days along the immediate south Labrador Coast and along the shores of Lake Melville and Hamilton Inlet to 240 days over western and northern Labrador. Summer lengths range from more than 140 days over the south Labrador Coast and the area close to Lake Melville and Hamilton Inlet to less than 100 days in the higher elevations of northern inland Labrador. There is no high summer over northern Labrador, the higher elevations of western Labrador, or along the immediate coast of southern Labrador. A very short high-summer period exists over inland southern Labrador, the longest occurring inland from Lake Melville, about 60 days or more.

Yukon Territory

Over all of the Yukon Territory winter is much longer than summer. The length of winter ranges from just under 200 days in the river valleys to more than 220 days over higher plateaus. Near the coast of the Beaufort Sea, winter is as long as 260

days. Summer length ranges from 140 days or more in most river valleys to fewer than 120 days over higher plateaus. The complete summer season is less than 100 days in duration near the coast of the Beaufort Sea. Near the Beaufort Sea coast there is no high summer. Lengths of the high-summer period increase southward, but in general, are less than 60 days, even in the river valleys.

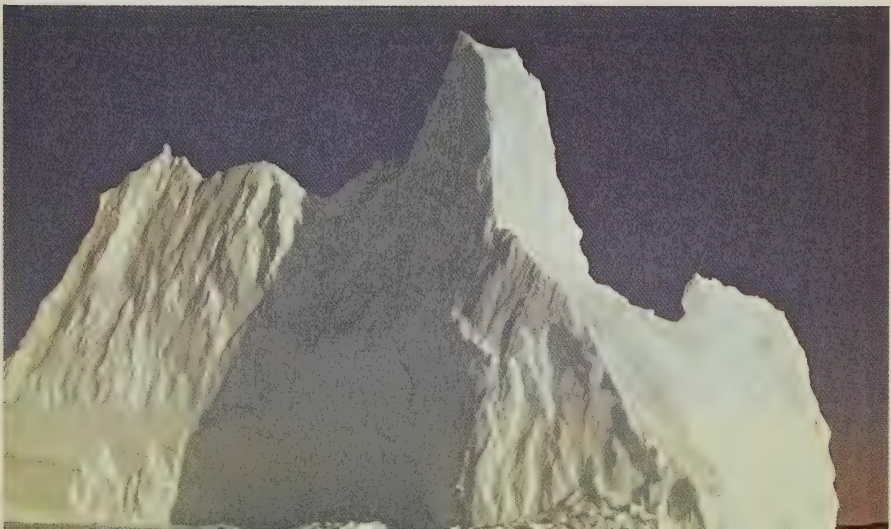
Mackenzie and Keewatin Districts

Winter is much longer than summer over all of mainland Northwest Territories. Winter lasts less than 200 days only in the southern Mackenzie River valley and around Great Slave Lake. Over the barren lands to the northeast, the length of winter gradually increases from 220 to 270 days. Summer lasts 140 days or more over most of the Mackenzie District, although it is less than 100 days at the mouth of the Mackenzie River. Over the barren lands to the northeast, the length of summer falls off to less than 100 days at many places. High summer occurs over most of the District of Mackenzie, the main exceptions being the Beaufort Sea coast and the northeastern part of the District. High summer is very short in most places, however, the longest period being about 80 days over part of the upper Mackenzie River and lower Liard River valleys.

The Arctic Islands

Winter is much longer than summer over all of the Arctic islands. Winter generally lasts from about 270 days to more than 300 days and summer from about 80 days to less than 40 days. The highest elevations and more northerly latitudes generally have the longest winters and shortest summers. There is no high-summer period over the Arctic islands.

Admiralty Inlet, NWT.



Canada's seasons (day/month)

Province or territory and urban centre	Duration (days) (excludes two-week spring thaw)									
	Winter begins	Winter ends	Spring shoulder begins	High summer begins	High summer ends	Winter	Spring shoulder	High summer	Autumn shoulder	Complete summer
British Columbia										
Comox.....	7/1	21/2	8/3	27/5	6/9	46	80	103	122	305
Dease Lake.....	16/10	10/5	25/5	23/6	13/8	207	29	52	63	144
Estevan Point.....	15/1	8/2	23/2	NHS ¹	NHS ¹	25	²	0	²	326
Fort Nelson.....	19/10	23/4	8/5	29/5	29/8	187	21	93	50	164
Fort St. John.....	21/10	21/4	6/5	5/6	28/8	183	30	85	53	168
Hope.....	6/12	7/3	22/3	10/5	29/9	92	49	143	67	259
Kamloops.....	24/11	4/3	19/3	26/4	30/9	101	38	158	54	250
Kimberley.....	16/11	4/4	19/4	15/5	23/9	140	26	132	53	211
Penticton.....	3/12	26/2	13/3	1/5	30/9	86	49	153	63	265
Prince George.....	28/10	13/4	28/4	1/6	1/9	168	34	93	56	183
Prince Rupert.....	4/12	23/3	7/4	NHS ¹	NHS ¹	110	²	0	²	241
Quesnel.....	5/11	10/4	25/4	11/5	15/9	157	16	128	50	194
Sandspit.....	24/12	25/2	12/3	NHS ¹	NHS ¹	64	²	0	²	287
Smithers.....	10/11	10/4	25/4	5/6	31/8	152	41	88	70	199
Vancouver.....	25/12	22/2	9/3	1/6	16/9	60	84	108	99	291
Victoria.....	1/1	22/2	9/3	19/6	11/9	53	102	85	111	298
Alberta										
Banff.....	27/10	30/4	15/5	19/6	1/9	186	35	75	55	165
Calgary.....	19/10	4/5	19/5	6/6	9/9	198	18	96	39	153
Cold Lake.....	30/10	18/4	3/5	27/5	5/9	171	24	102	54	180
Coronation.....	9/11	28/4	13/5	27/5	9/9	171	14	106	60	180
Edmonton.....	31/10	23/4	8/5	27/5	5/9	175	19	102	55	176
Fort Chipewyan.....	22/10	30/4	15/5	10/6	30/8	191	26	82	52	160
Fort McMurray.....	31/10	24/4	9/5	29/5	31/8	176	20	95	60	175
Grande Prairie.....	23/10	21/4	6/5	1/6	3/9	181	26	95	49	170
Jasper.....	27/10	16/4	1/5	5/7	6/9	172	65	64	50	179
Keg River.....	20/10	1/5	16/5	25/5	1/9	194	9	100	48	157
Lethbridge.....	20/10	25/4	10/5	19/5	22/9	186	9	127	29	165
Medicine Hat.....	1/11	15/4	30/4	12/5	25/9	166	12	137	36	185
Peace River.....	26/10	20/4	5/5	31/5	7/9	177	26	100	48	174
Pincher Creek.....	19/10	5/4	20/5	10/5	18/9	199	21	101	30	152
Red Deer.....	31/10	3/4	18/5	31/5	11/9	185	13	104	49	166
Wagner.....	27/10	19/4	4/4	10/6	27/8	175	37	79	60	176
Whitecourt.....	24/10	25/4	10/4	2/6	1/9	184	23	92	52	167
Saskatchewan										
Broadview.....	7/11	19/4	4/5	29/5	9/9	164	25	104	58	187
Cree Lake.....	21/10	2/5	17/5	19/6	25/8	194	26	75	56	157
Estevan.....	8/11	6/4	21/4	19/5	20/9	150	28	125	48	201
Hudson Bay.....	6/11	24/4	9/5	30/5	6/9	170	21	100	60	181
Island Falls.....	24/10	2/5	17/5	10/6	26/8	191	23	78	59	160
La Ronge.....	2/11	24/4	9/5	12/6	30/8	174	34	80	63	177
North Battleford.....	2/11	15/4	30/4	23/5	10/9	165	23	111	52	186
Prince Albert.....	1/11	20/4	5/5	25/5	8/9	171	20	107	53	180
Regina.....	6/11	18/4	3/5	19/5	16/9	164	16	121	50	187

Canada's seasons
(day/month)

Province or territory and urban centre	Duration (days) (excludes two-week spring thaw)									
	Winter begins	Winter ends	Spring shoulder begins	High summer begins	High summer ends	Winter	Spring shoulder	High summer	Autumn shoulder	Complete summer
Saskatchewan (concluded)										
Saskatoon.....	2/11	16/4	1/5	20/5	14/9	166	19	118	48	185
Swift Current.....	26/10	14/4	29/4	26/5	21/9	171	27	119	34	180
Uranium City.....	20/10	4/5	19/5	15/6	24/8	197	27	71	56	154
Yorkton.....	5/11	20/4	5/5	27/5	10/9	167	22	107	55	184
Manitoba										
Berens River	6/11	1/5	16/5	4/6	4/9	177	19	93	62	174
Brandon	7/11	16/4	1/5	20/5	17/9	161	19	121	50	190
Brochet.....	15/10	5/5	20/5	1/7	17/8	203	42	48	58	148
Churchill.....	4/10	27/5	11/6	NHS ¹	NHS ¹	236	²	0	²	115
Dauphin.....	4/11	28/4	13/5	25/5	12/9	176	12	111	52	175
Gimli.....	7/11	20/4	5/5	31/5	9/9	165	26	102	58	186
Grand Rapids.....	4/11	27/4	12/5	4/6	2/9	175	23	91	62	176
Gypsumville.....	8/11	23/4	8/5	2/6	9/9	167	25	100	59	184
Island Lake	20/10	14/5	29/5	13/6	26/8	207	15	75	54	144
Morden	7/11	8/4	23/4	20/5	20/9	153	27	124	47	198
Norway House.....	2/11	3/5	18/5	8/6	29/8	183	21	83	64	168
The Pas	5/11	27/4	12/5	1/6	30/8	174	20	91	66	177
Thompson.....	18/10	10/5	25/5	17/6	25/8	205	23	70	53	146
Wabowden.....	25/10	4/5	19/5	12/6	26/8	192	24	76	59	159
Winnipeg.....	6/11	14/4	29/4	22/5	16/9	160	23	118	50	191
York Factory	8/10	23/5	7/6	NHS ¹	NHS ¹	198	²	0	²	153
Ontario										
Armstrong.....	24/10	3/5	18/5	6/6	31/8	192	19	87	53	159
Atikokan	1/11	27/4	12/5	27/5	9/9	178	15	106	52	173
Bancroft	11/11	15/4	30/4	18/5	20/9	156	18	126	51	195
Bracebridge.....	14/11	13/4	28/4	18/5	21/9	151	20	127	53	200
Chapleau	26/10	26/4	11/5	30/5	2/9	183	19	96	53	168
Cornwall	27/11	4/4	19/4	13/5	26/9	129	24	137	61	222
Fort Frances.....	3/11	26/4	11/5	25/5	11/9	175	14	110	52	176
Gore Bay	14/11	8/4	23/4	28/5	18/9	146	35	114	56	205
Haileybury	11/11	17/4	2/5	26/5	12/9	158	24	110	59	193
Hornepayne.....	26/10	4/5	19/5	6/6	31/8	191	18	87	55	160
Kapuskasing	21/10	6/5	21/5	4/6	1/9	198	14	90	49	153
Kenora.....	28/10	27/4	12/5	31/5	5/9	182	19	98	52	169
Kingston	28/11	1/4	16/4	18/5	28/9	125	32	134	60	226
Lansdowne House.....	19/10	18/5	2/6	14/6	23/8	212	12	71	56	139
London.....	22/11	30/3	14/4	16/5	30/9	129	32	138	52	222
Niagara Falls.....	29/11	28/3	12/4	14/5	3/10	120	32	143	56	231
Marathon	21/10	20/4	5/5	11/7	21/8	182	67	42	60	169
Moosenee.....	25/10	11/5	26/5	16/6	26/8	199	21	72	59	152

¹No high summer.

²Indeterminate.



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1. Travelling by kayak on Rivière Jacques-Cartier in Quebec.
2. One of the many beaches of the St. Lawrence River.
3. Cross-country skiing in the Laurentians of Quebec.
4. Sailboat racing on the Gatineau River.
5. Learning to skate.
6. Cross-country skiing near Lake Superior.
7. Tranquility of nature at Whiteshell Provincial Park in Manitoba.
8. All ages enjoy snowmobiling.



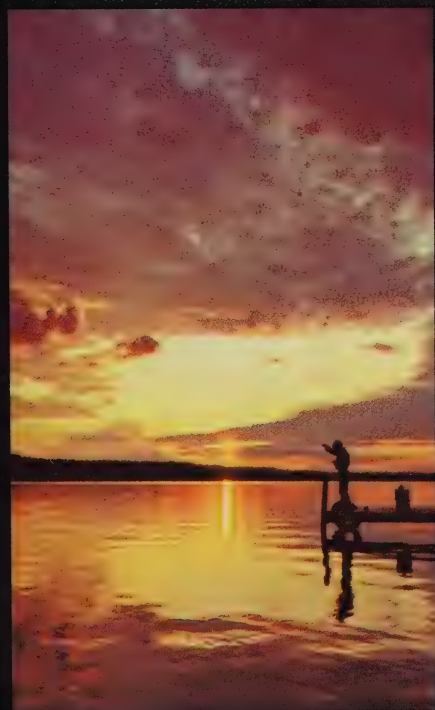
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Canada's seasons
(day/month)

Province or territory and urban centre	Duration (days) (excludes two-week spring thaw)									
	Winter begins	Winter ends	Spring shoulder begins	High summer begins	High summer ends	Winter	Spring shoulder	High summer	Autumn shoulder	Complete summer
Ontario (concluded)										
North Bay.....	11/11	15/4	30/4	20/5	19/9	156	20	123	52	195
Orillia.....	15/11	7/4	22/4	21/5	24/9	144	29	127	51	207
Ottawa.....	26/11	7/4	22/4	15/5	24/9	133	23	133	62	218
Pembroke.....	18/11	11/4	26/4	12/5	26/9	145	16	138	52	206
Pickle Lake.....	22/10	8/5	23/5	9/6	29/8	199	17	82	53	152
Red Lake.....	24/10	3/5	18/5	3/6	3/9	192	16	93	50	159
Richmond Hill.....	22/11	1/4	16/4	19/5	27/9	131	33	132	55	220
Sault Ste Marie.....	10/11	10/4	25/4	3/6	13/9	152	39	103	57	199
Sioux Lookout.....	23/10	29/4	14/5	2/6	3/9	189	19	94	49	162
Sudbury.....	12/11	13/4	28/4	21/5	17/9	153	23	120	55	198
Thunder Bay.....	9/11	17/4	2/5	3/6	9/9	160	32	99	60	191
Timmins.....	29/10	28/4	13/5	28/5	7/9	182	15	103	51	169
Tobermory.....	15/11	6/4	21/4	6/6	16/9	143	46	103	59	208
Toronto Island.....	30/11	29/3	13/4	29/5	25/9	120	46	120	65	231
Trenton.....	28/11	29/3	13/4	18/5	28/9	122	35	134	60	229
Trout Lake.....	16/10	20/5	4/6	25/6	18/8	217	21	55	58	134
Walkerton.....	10/11	6/4	21/4	16/5	27/9	148	25	135	43	203
Windsor.....	29/11	26/3	10/4	9/5	8/10	118	29	153	51	233
Winisk.....	8/10	23/5	7/6	NHS ¹	NHS ¹	228	²	0	²	123
Quebec										
Bagotville.....	5/11	20/4	5/5	30/5	7/9	167	25	101	58	184
Cape Hopes Advance.....	6/10	23/6	8/7	NHS ¹	NHS ¹	261	²	0	²	129
Fort-Chimo.....	13/10	22/5	6/6	NHS ¹	NHS ¹	222	²	0	²	90
Grindstone Island.....	29/11	24/4	9/5	7/7	27/8	147	59	52	93	204
Harrington Harbour.....	8/11	6/5	21/5	NHS ¹	NHS ¹	180	²	0	²	171
Inoucdjouac.....	14/10	10/6	25/6	NHS ¹	NHS ¹	240	²	0	²	111
Manouane Lake.....	22/10	18/5	2/6	26/6	16/8	209	24	52	66	142
Mont-Joli.....	8/11	21/4	6/5	10/6	1/9	165	35	84	67	186
Montreal.....	24/11	3/4	18/4	16/5	25/9	131	28	133	59	220
Nitchequon.....	18/10	29/5	13/6	NHS ¹	NHS ¹	224	²	0	²	127
Post-de-la-Baleine.....	25/10	28/5	12/6	NHS ¹	NHS ¹	216	²	0	²	135
Quebec.....	14/11	16/4	1/5	24/5	16/9	154	23	116	58	197
Schefferville.....	27/9	27/5	11/6	NHS ¹	NHS ¹	243	²	0	²	108
Sept Îles.....	7/11	3/5	18/5	1/7	20/8	178	44	51	78	173
Sherbrooke.....	14/11	14/4	29/4	19/5	21/9	152	20	126	53	199
Val D'Or.....	25/10	30/4	15/5	1/6	1/9	188	17	93	53	163
New Brunswick										
Campbellton.....	17/11	17/4	2/5	4/6	14/9	152	33	103	63	199
Chatham.....	14/11	13/4	28/4	31/5	20/9	151	33	113	54	200
Fredericton.....	20/11	13/4	28/4	22/5	21/9	145	24	123	59	206
Moncton.....	22/11	25/4	10/5	2/6	21/9	155	23	112	61	196
Saint John.....	27/11	9/4	24/4	8/6	20/9	134	45	105	67	217
Nova Scotia										
Ecum Secum.....	13/12	8/4	23/4	12/7	11/9	117	80	62	92	234
Greenwood.....	30/11	28/3	12/4	24/5	24/9	119	12	124	66	202

Canada’s seasons
(day/month)

Province or territory and urban centre	Duration (days) (excludes two-week spring thaw)									
	Winter begins	Winter ends	Spring shoulder begins	High summer begins	High summer ends	Winter	Spring shoulder	High summer	Autumn shoulder	Complete summer
Nova Scotia (concluded)										
Halifax	5/12	3/4	18/4	10/6	22/9	120	53	105	73	231
Liverpool	3/12	29/3	13/4	10/6	22/9	117	58	105	71	234
Sydney	1/12	24/4	9/5	15/6	18/9	145	37	96	73	206
Truro	30/11	14/4	29/4	8/6	21/9	136	40	106	69	215
Yarmouth	29/11	21/3	5/4	24/6	10/9	113	80	79	79	238
Prince Edward Island										
Charlottetown	20/11	19/4	4/5	13/6	15/9	151	40	95	65	200
Summerside	29/11	13/4	28/4	11/6	17/9	136	44	99	72	215
Newfoundland										
Buchans	16/11	5/5	20/5	27/6	29/8	171	38	64	78	180
Cape Race	15/12	17/4	2/5	NHS ¹	NHS ¹	124	²	0	²	227
Cartwright	27/10	20/5	4/6	14/7	8/8	206	40	26	79	145
Daniel’s Harbour	19/11	12/4	27/4	22/7	10/8	145	86	20	100	206
Gander	2/11	6/5	21/5	25/6	2/9	186	35	70	93	165
Goose	23/10	15/5	30/5	28/6	23/8	205	29	57	60	146
Grand Bank	27/11	11/4	26/4	14/6	25/8	136	79	43	60	215
Hopedale	25/10	31/5	15/6	NHS ¹	NHS ¹	219	²	0	²	132
St. Anthony	13/11	4/5	19/5	25/7	3/8	173	67	10	101	178
Stephenville	20/11	15/4	30/4	6/7	28/8	147	67	54	83	204
St. John’s	28/11	4/5	19/5	5/7	26/8	158	47	53	93	193
Twillingate	14/11	3/5	18/5	9/7	21/8	171	52	44	84	180
Yukon Territory										
Dawson	16/10	28/4	13/5	2/6	18/8	195	20	78	58	156
Mayo	16/10	25/4	10/5	4/6	18/8	192	25	76	58	159
Watson Lake	16/10	3/5	18/5	8/6	21/8	200	21	75	55	151
Whitehorse	28/10	22/4	7/5	13/6	11/8	177	37	60	77	174
Northwest Territories										
Aklavik	29/9	21/5	5/6	9/7	20/7	235	34	12	70	116
Cambridge Bay	28/9	21/6	6/7	NHS ¹	NHS ¹	267	²	0	²	84
Chesterfield	6/10	19/6	4/7	NHS ¹	NHS ¹	257	²	0	²	94
Clyde	12/9	28/6	13/7	NHS ¹	NHS ¹	290	²	0	²	61
Coppermine	3/10	12/6	27/6	NHS ¹	NHS ¹	253	²	0	²	98
Fort Reliance	6/10	20/5	4/6	12/7	1/8	227	38	21	65	124
Fort Simpson	19/10	6/5	21/5	5/6	23/8	200	15	80	56	151
Fort Smith	21/10	4/5	19/5	7/6	25/8	196	19	80	56	155
Frobisher Bay	28/9	6/6	21/6	NHS ¹	NHS ¹	252	²	0	²	99
Hay River	19/10	2/5	17/5	27/6	31/8	196	41	66	48	155
Norman Wells	3/10	14/5	29/5	11/6	16/8	224	13	67	47	127
Resolute	12/9	29/6	14/7	NHS ¹	NHS ¹	291	²	0	²	60
Yellowknife	19/10	6/5	21/5	25/6	14/8	200	35	51	65	151

¹No high summer.

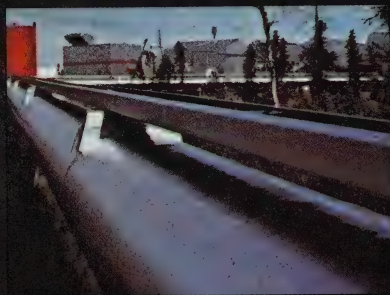
²Indeterminate.



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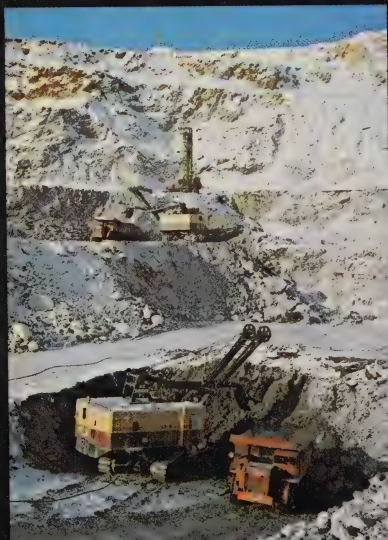
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The Canadian North

1. Drum-dancing near Arctic Bay, NWT.
2. Dam on the Yukon River near Whitehorse.
3. 48" gas pipeline testing at Sans Sault Rapids, NWT.
4. Emergency rescue helicopter on Baffin Island.
5. Open-pit mining near Faro, Yukon Territory.
6. Drill core from lead-zinc mining operations at Great Slave Lake, NWT.
7. Fort Simpson, NWT.
8. The Arctic art of scraping hide.





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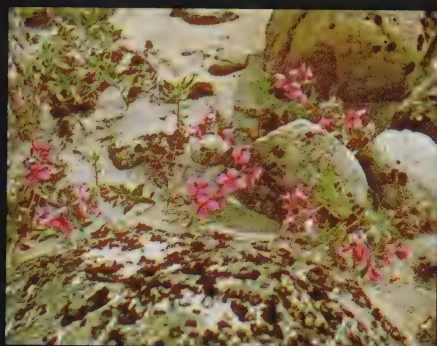


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1. Arctic hare bask in sunlight on Ellesmere Island, NWT.
2. Kolik River, Baffin Island.
3. Travelling in comfort at Pond Inlet, NWT.
4. The Con Mine, first gold producer in the Northwest Territories, is still in production.
5. Arctic flowers on Baffin Island.
6. New control tower at Whitehorse Airport, Yukon Territory.
7. Children romp in fields of Arctic cotton.
8. Airport at Resolute on Cornwallis Island, NWT.



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the people and their heritage

The Native Peoples

Indians

The Native peoples of Canada historically have had and still have special relationships with the federal government. On December 31, 1974 there were 276,436 persons registered as Indians under the provisions of the Indian Act. There were 566 separate Indian bands in Canada for whom 2,214 reserves have been set aside. Total area of the reserves is about 6.4 million acres. Approximately half of the registered Indian population is entitled to receive treaty payments as a result of treaties signed between their ancestors and the Crown. By such agreements some Indian groups surrendered land in return for reserves, gifts and promises of certain services. Reserve lands are in effect Crown-owned and cannot be freely sold or leased by individual band members nor by bands without band council surrender and approval by the Minister of Indian Affairs and Northern Development.

The number of persons of Indian ancestry who are not entitled to be registered under the provisions of the Indian Act is unknown. Included among these people are those Indians who have given up their Indian status and band membership through the legal process known as enfranchisement — Indian women who have

married non-Indians, the *Métis* and the descendants of persons who received land or money-scrip.

There are ten major linguistic groups of Indians in Canada: Algonkian, Iroquoian, Siouan, Athapaskan, Kootenayan, Salishan, Wakashan, Tsimshian, Haida and Tlingit. Each group contains a number of sub-groups with 54 different languages or dialects.

Over the years the Indian Act, which is intended to safeguard the interests of Indian people, has also had a somewhat inhibiting effect on their social and economic development. However, changes to the Indian Act will be effected only after consultation with the Indian people, and after their consideration of suggestions. During the past few years a considerable amount of research of the Indian Act and related issues has been done by Indian associations. In 1974, following negotiations, the Department funded a four month \$225,000 study by the National Indian Brotherhood. The preliminary study was co-ordinated by the Indian Association of Alberta. Further studies, involving participation of provincial Indian associations and the collation of available information concerning possible amendments to the Act are continuing.

Native Claims. In 1969, a Commissioner of Indian Claims was appointed and in 1970, to enable Indian people to identify and document their land claims and related grievances, a research program was instituted. By March 1976, more than \$9 million will have been disbursed for this purpose. Among the Department's other new policies and programs are those concerning economic development, education and community affairs.

Economic Development. Much of the native population is spread thinly over large areas of land which, for the most part, is rugged and inaccessible. However,

Assiniboine Indian children dancing at Banff Indian Days celebration.



due to the changes taking place on the industrial and commercial development scene in Canada, many bands are now finding themselves in locations ideally suited for development. The Economic Development Fund, established in 1970, had a working capital of \$90 million in 1975. Previous to the establishment of this fund, Indian people had difficulty obtaining even simple bank loans. Restrictions imposed by the Indian Act have traditionally limited the investment of risk capital on Indian reserves. As a result, Indian reserves have not been able to develop as rapidly as other communities and could not obtain the services and utilities which are necessary to encourage and attract industrial and commercial development. This cycle of circumstances is a major reason for the Indian welfare-poverty cycle.

Since the start of the Fund, Indians have been able to take out development loans and work toward their economic independence. The bulk of the Fund, advanced as loans, is repaid along the lines of conventional lenders. The Fund also provides guarantees to attract conventional sources of investment capital. For example, \$62.5 million of outside capital was garnered during the Fund's first three years of operation. By the first quarter of 1975, the businesses successfully undertaken by Indian people or in partnership with off-reserve industries had resulted in over 6,700 jobs for Indian people, in such endeavours as farming, vacation resorts, hotels, motels, shopping centres, contracting, outfitters, a Karate school and prefab-housing plants.

Education. In Canada, education is under provincial or territorial jurisdiction but the provision of education services to Indians living on reserves is the responsibility of the federal government. A complete range of education services ranging from four-year-old kindergarten to university, professional or technological education and trade training is fully funded by the federal government. Approximately 60 per cent of reserve based Indian children attend schools operated under provincial jurisdiction, whereas the remaining 40 per cent attend schools on reserves operated either by the Department of Indian Affairs and Northern Development or the Indian bands. In all cases, the federal government assumes the total costs for these services. Since the acceptance of the National Indian Brotherhood paper "Indian Control of Indian Education" in 1973, an increasing number of Indian bands are assuming control of their schools and other educational programs. Since that date, the major thrust of the Department's involvement in Indian education has been directed toward facilitating the transfer of educational programs to Indian bands and working with Indian groups to develop appropriate curricula. Emphasis has been placed on native languages and culture. A total of 208 Indian language programs were offered in 174 federal schools during 1974. Many provincial schools offer native language programs. In addition, a number of provincial governments have passed legislation to enable provincial schools to include in their curricula, the arts, customs, music, language and history of the native peoples. Band staff training, to ensure successful administration of local government programs, is treated as a priority activity in educational programs.

A large increase in enrolment in university courses and other post-secondary educational courses has taken place in recent years. During 1974-75, almost 2,000 students were receiving assistance from the Department to attend university, and more than 1,300 were attending community colleges and technical institutes. Several provinces and universities have designed and conducted special teacher



Indians from surrounding reserves have re-created authentic teepees in Alberta's Heritage Park.

training courses to encourage natives to enter the teaching profession. Paraprofessional courses are also conducted to train Indian teacher aides and social counselors for federal, provincial and band operated schools. The Department also supports vocational training, vocational counselling and employment placement programs in co-operation with the Department of Manpower.

Community Affairs. A policy encouraging the development of local government on Indian reserves began to evolve in 1965 in response to the expressed wishes of the Indian people to assume greater responsibility for the administration of their own affairs. At that time some 26 Indian bands from across Canada had assumed responsibility for the administration of certain specific departmental programs amounting to \$66,000.

In response to substantially increasing interest expressed by bands in managing their own affairs, the Department sought and obtained approval from Treasury Board to enable bands to manage a much wider range of departmental programs. This increased interest is reflected by the fact that in 1975 some 500 of the 566 Indian bands in Canada managed departmental programs in excess of \$90 million. The concept of gradual assumption by bands of increased responsibility is the foundation of the Indian Local Government program. Departmental policies will continue to reflect this approach.

Inuit (Eskimos)

During recent years the many changes and developments in the Canadian north have affected almost every aspect of the lives of the more than 18,000 Eskimos (or Inuit as they prefer to be called) living there. These northern people have survived for many centuries in spite of the harsh conditions under which they have had to live and in recent years they have been offered new opportunities and facilities for strengthening their capacity to survive.

Early accounts and archaeological research show that the Canadian Inuit once ranged farther south than they do now, particularly on the Atlantic seaboard. Traditionally they were mainly a coastal people and they settled by the sea. Seals, walruses, fish, polar bears and whales were their sources of food, fuel and clothing. Centuries ago one group, however, broke away from the others to follow the caribou herds to the interior, where they formed a culture that was much different. They lived on the caribou herds and fish from the inland lakes; they made fires from shrubs instead of blubber and rarely visited the sea.

The early explorers of the Canadian Arctic met Inuit from time to time over a period of some 300 years but had few dealings with them. Development in arctic Canada came at a much later date than in other arctic lands. However, early in the 19th century with the arrival of the whaling ships and the fur traders such as the men of the Hudson's Bay Company, changes began to take place. Through their dealings with whalers and traders the Inuit began to move into a position of some dependence upon the white man's goods and supplies. The old Stone Age wandering life was becoming less attractive to them.

Trading posts were built along both shores of Hudson Strait by 1923, down the east coast of Hudson Bay to Port Harrison and up the west coast of Hudson Bay to Repulse Bay. A similar development took place in the western Arctic. The Hudson's Bay Company now has some 30 posts in arctic regions.

With World War II came a rapid development in air travel, the building of defence installations, and meteorological and radio stations. During the past two decades the reduction of the Inuit's isolation has proceeded apace.

Pangnirtung Pass, Baffin Island, NWT.



Many of these people have made a difficult and dramatic transition from nomadic hunters to modern urbanized residents. By such means as the ANIK communications satellite, telephone, radio and television transmissions are now beamed into the Inuit household.

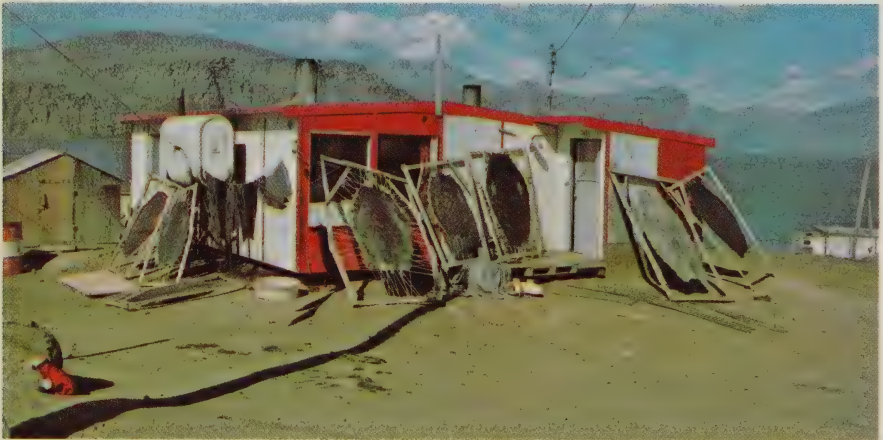
The sled dogs, long-time companions and necessity to the Inuit, have gone. The motorized toboggan has replaced them, and for longer journeys the airplane is the Arctic taxi. Few communities are without airstrips. Modern technology in the form of STOL (short take-off and landing) and jet aircraft have considerably shrunk the vast spaces of the Inuit domain.

Various programs, initiated by the federal government, such as education, social affairs, local government and economic development, have also contributed to the dramatic change in the Inuit way of life. Arctic co-operatives, for example, today do a total volume of business of over \$8 million annually, and to a large extent control the marketing of all Inuit art. Federal schools have been built in every Inuit community. Beyond Grade 6, or 8 in some locations, students attend pre-vocational or secondary schools either in the Arctic or at locations in southern Canada.

Many communities have evolved from having a resident government administrator to becoming incorporated villages, managing their own affairs through elected councils. The Council of the Northwest Territories, a provincial-style body, has six Inuit elected members.

Concern for the survival of Inuit identity and culture resulted in 1971 in the formation of Inuit Tapirisat of Canada (ITC—the Eskimo Brotherhood), an association funded by the Secretary of State in the interest of the Inuit people. In consultation with the Department of Indian Affairs and Northern Development, ITC has initiated many programs aimed at improving the lot of the Inuit. These include a

Seal skins drying, Baffin Island, NWT.





Seal hunting near Arctic Bay, NWT.

major study of land claims (the legal view of the Inuit with regard to the lands and waters they occupy), a land-use and occupancy study (similar to, and supporting the land claims), legal assistance and a legal service centre to assist Inuit in remote areas, a language commission which is studying the possibility of standardization of the Inuit orthography, sponsorship of an Inuit Cultural Institute in the Arctic, and a layman's information guide to Canadian law entitled "Inuit and the Law". In all of these, the Department of Indian Affairs and Northern Development has contributed much in finances and encouragement.

With the spirited search for oil, gas and minerals in the Arctic, much is being done to create and make available opportunities for the employment of Inuit in the petroleum and related industries. However, some adult Inuit still live by their traditional skills of hunting, trapping and fishing. One of the most successful and remarkable revenue-producing pursuits of the Inuit is based on their creative talents expressed in the media of stone, bone and ivory sculpture and vibrant graphics depicting his lifestyle and culture. This industry is expanding and through local co-operatives ensures the artist of a fair return for his works of art.

History

Canada is an independent nation in North America composed of two predominant linguistic and cultural groups: French and English. To these two major groups, and to the small native population of Indians and Inuit, have been added over the last hundred years many thousands of immigrants representing the major European cultures. For the most part these immigrant groups have associated themselves with the English-speaking community, though maintaining many aspects of their mother cultures. The country has thus never been a homogeneous melting pot, but has rather had the aspect of a cultural mosaic in which the major pattern is traced in the colours of the French and English cultures.

Much of the country's history can be viewed as a continuing search for accommodation and co-operation between the two major cultural communities, and the integration of newcomers into the basic pattern. At the same time as this internal accommodation has been working itself out, the country has passed through a dual process of self-definition in relation to the outside world. The first of these processes has been the evolution of the country from the status of a colony within the British Empire to the stature of independent nationhood within the Commonwealth. The second more subtle and often more difficult process has been in defining and defending its independence in relation to the power and prestige of its enormous neighbour, the United States. These two themes of internal bicultural accommodation and external self-definition underlie and affect nearly every other development in the Canadian past: patterns of settlement, institutional growth, economic development, foreign policy and cultural evolution.

The exploration and settlement of North America by Europeans began seriously at the beginning of the 17th century. There had, of course, been earlier voyages dating back as far as the Norsemen, but concentrated efforts had to await the emergence of the powerful nation states of Europe. From the earliest beginnings the French and English established competitive settlements and trading centres. The English moved in from the north through Hudson Bay in the 1670s but the French

Fortress of Louisbourg, NS.





Fort Garry, Man.

had already penetrated the continent through the vast St. Lawrence River more than half a century earlier. To the south were the Dutch on the Hudson, soon to be pushed out by the British, and the Puritan settlements in New England. As these colonies grew, so did competition for the hinterlands. The French pressed north and westward to challenge the English on Hudson Bay. And traders from the two communities, with the aid of their Indian allies, struggled for control of the rich Ohio valley. It was this competition, and the rivalry of France and Britain in Europe, which ultimately brought war and the downfall of the French empire in North America. But before that event took place New France had sunk deep roots along the banks of the St. Lawrence and in Acadia.

The first half century of New France's existence, down to 1663, had been characterized by near failure on all fronts: settlement, missionary activity and trade. Yet it was this struggling period that provided later generations with a sense of an heroic past when the tiny colony struggled for survival against the elements, the Iroquois and the English. From these years came the heroes and martyrs, both religious and secular: Brébeuf and his brethren who died in their effort to bring Christianity to the Indians; Dollard and his young companions who died defending the colony and its trade at the Long Sault in 1660.

By 1663 the colonists numbered fewer than 2,500 and the future was bleak. It was saved only by the decision of Louis XIV to assume direct control of his North American possessions. The establishment of royal government was accompanied

by an infusion of new settlers, trained civil servants with plans for economic development and troops to defend the colony. Though the colony's economy became somewhat more diversified it remained dependent upon France on the one hand and the fur trade on the other. By the 1740s French-English rivalry in Europe, North America and elsewhere in the world brought the beginnings of the war that was to spell the end of New France. The final phase of that war began in 1754 and was concluded by the Treaty of Paris in 1763 when France's major North American possessions were ceded to the British.

The British Conquest of Canada, a major event in the country's history, temporarily united North America under the British flag. Within two decades that unity was permanently destroyed by the success of the American War of Independence. Yet in the intervening period the French-speaking inhabitants of Canada, numbering about 70,000 at the time of the Conquest, had continued to exhibit their capacity to survive. Faced with growing unrest in the 13 colonies, the British authorities in Canada gave up an early attempt to assimilate their new subjects and granted recognition, in the Quebec Act of 1774, to the major institutions of the French-speaking community: its civil laws, its seigneurial system, its Roman Catholic religious organization. The efforts of the revolting colonies to add Canada and Nova Scotia to their cause failed. But during and after the war thousands of Loyalists fled northward, settling in Nova Scotia, what was later to become New Brunswick, and to Canada both in the Eastern Townships and the western region of the colony north of Lake Ontario. It was in this fashion that the first substantial group of English-speaking settlers established themselves in the predominantly French-speaking British colony. Here was the beginning of the pattern of Canada's future development.

The coming of the Loyalists required new constitutional arrangements. The Constitutional Act of 1791 divided the old province of Quebec into two colonies, Upper and Lower Canada, and granted each its first representative assembly, an institution which had existed in Nova Scotia since 1758. It was within the context of this constitution that the colony began to grow economically and demographically. It was also within this context that a struggle took place for internal self-government or responsible government. That was achieved in 1849 but only after abortive rebellions in the two Canadas in 1837 and the reunification of the two colonies in 1841.

By the middle of the 19th century the British colonies in North America — Canada, Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland — were ready to move haltingly toward a new stage in their constitutional development. Each colony separately faced an increasing burden of public expenditure in the age of canal and railway building. Each, too, was faced with limited markets, since the coming of free trade in Britain had ended their preferential treatment within the Empire. In the Canadas there was the additional problem of growing political deadlock and threatening cultural conflict in a union based upon equality of representation for each of the two sections. And, finally, in the 1860s, there was the threat of an increasingly hostile United States just emerging from its bloody civil war. These events, plus the encouragement of Britain anxious to reduce its commitments in North America, resulted in a decision in 1865 to move toward a federation of all British North America.

That federation was partially achieved on July 1, 1867, when the Canadas, Nova Scotia and New Brunswick joined together in Confederation under the British North America Act. This constitution was the work of an energetic group of British North American politicians including John A. Macdonald, George Brown, George-Étienne Cartier, Alexander Galt of Canada, Charles Tupper of Nova Scotia and Leonard Tilley of New Brunswick. Their combined political skills and legal talents were severely tested in the foundation of "the new nationality." The constitution was a highly centralized federal scheme which made the central government clearly dominant, but left to the provinces those matters which they considered to be of purely local concern. The French and English languages were established as official in the federal Parliament, its records, and its courts, and the province of Quebec was also recognized as an officially bilingual province. The new nation was a parliamentary monarchy operating according to the well-understood principles of cabinet government. The Parliament of Canada at Ottawa was composed of the Crown's representative, the Governor General and a bicameral legislature, the House of Commons and the Senate.

At the outset the plan was incomplete for it was intended that the territory of the new nation should stretch from coast to coast. The first step was the acquisition of the lands owned by the Hudson's Bay Company in the west. This was quickly achieved but the first new province, Manitoba, was established only after a rebellion in Red River led by a young Métis, Louis Riel, was defeated. The province was established in 1870. A year later the Pacific coast province of British Columbia entered the union on the promise that a transcontinental railway would be built.

Bellevue House, John A. Macdonald's home in Kingston, Ont.



Two years later Prince Edward Island was added. In 1874 the extensive lands between Manitoba and British Columbia were organized as the Northwest Territories. This area, in 1885, was the scene of a second uprising of *Métis* and Indians again led by Louis Riel. The completion of the Canadian Pacific Railway in that same year made it possible for the Canadian authorities to defeat the rebels, and this time Riel was captured, tried, and hanged for treason. Twenty years later, in 1905, the provinces of Saskatchewan and Alberta were added to the union. The last of the 10 provinces to join Canada was Newfoundland in 1949.

Once the basic structure was established, the federal Conservative government, led by Sir John A. Macdonald, proceeded to develop policies to fill out the skeleton. The railway, binding together the various far-flung sections, was the first developmental policy. But along with it were immigration programs to populate the open spaces with agricultural settlers and a policy of tariff protection, announced in 1879, to develop a Canadian industrial system. It was the Macdonald government's determination to build a national economy on an east-west axis independent of the United States.

Though the Liberal opposition had been critical of many of these policies, when they came to power under Wilfrid Laurier in 1896 they continued them with few modifications. The major difference was that under Laurier the policies experienced greater success because prosperous world economic conditions provided investment funds for Canadian development, markets for the country's growing grain and mineral production and thousands of new immigrants from Great Britain, the US and Europe. By the outbreak of World War I Canada was well on its way to fulfilling the destiny which the Fathers of Confederation had predicted.

The Laurier years, for all of their prosperity, witnessed the beginnings of serious cultural, sectional and class conflicts. Relations between English- and French-speaking Canadians had been worsened by the hanging of Louis Riel, with whom

Upper Canada Village, Ont.





Indian horsemen lead North-West Mounted Police across the Bow River in colourful celebration of the historic crossing and Calgary's birthday on Aug. 24, 1875.

the French Canadian identified. Then came attacks upon the French language and Catholic separate schools in Manitoba and the Northwest in the 1890s. Laurier successfully smoothed over this latter crisis, but cultural relations were also strained by Canadian involvement in the Boer War and the long prewar debate over the country's place in Imperial affairs. French Canadians, on the whole, were reluctant to be involved in Imperial affairs, while many English Canadians identified Canadian interests with those of the Empire — especially since the Empire provided a protective umbrella against the US. This development reached its culmination in 1917 when the country, which had entered the war united, was split culturally over the issue of conscription for overseas service.

Sectional discontents were present especially in the Prairies. This region, almost exclusively agricultural, felt that the national economic policies were designed primarily for the industrial areas of central Canada. The defeat of a proposed reciprocity arrangement with the United States in the election of 1911 left the West in a mood of discontent which manifested itself only after the war in the form of the farmer's Progressive Party. Class tensions were apparent in the growth of labour organization under the leadership of the Trades and Labour Council of Canada. The

end of the war also saw labour conflict flare in a general strike in Winnipeg in the spring of 1919.

Canada emerged from the war, in which she had played a substantial part, with a new sense of national pride. That pride was transformed, in the postwar years, into a quest for a status of equality within the new British Commonwealth. Sir Robert Borden, the wartime Prime Minister, set this development in motion and it was continued by the Liberal and Conservative governments under W. L. M. King and R. B. Bennett. The Statute of Westminster in 1931 provided the legal definition of Canadian autonomy.

The Great Depression brought serious dislocation of the Canadian economy, heavy unemployment and new movements of social protest. In Quebec this discontent expressed itself in a new party called the *Union nationale* while elsewhere in Canada, especially in the West, the Social Credit and Co-Operative Commonwealth Federation parties made a marked impact. The federal government's major problem in these years was its weakened constitutional position, the provinces having been given or having won control over such matters as social welfare and natural resource development. A federal Royal Commission in 1940 recommended that the constitutional arrangements should be revised to give the federal government authority over major economic, social and tax policies. The recommendations were never implemented but the exigencies of the war once more placed the federal government in a predominant position.

The war and postwar years were a period of great prosperity and economic growth for Canadians. Again Canada played an important part in the war and its unity was only briefly threatened, again over the conscription issue. W. L. M. King's retirement in 1949 and his replacement by Louis St. Laurent marked an easy transition to postwar prosperity. Much of this new growth was financed by American direct investment so that prosperity was bought at the price of increasing American control of the Canadian economy. Since this came at a time when Canada was moving into closer European (NATO) and North American (NORAD) military alliances with the US, some Canadians began to worry about the country's future. It was this concern, added to a growing dissatisfaction in several of the provinces over Ottawa's centralist policies, that brought the Conservative John Diefenbaker to power in 1957.

The Diefenbaker years were marked by a growing debate over Canada-US relations and, more particularly, the revival of nationalism in Quebec under the guise of a "quiet revolution". This latter event included a whole series of measures meant to modernize Quebec society now transformed by accelerated industrialism. With increasing frequency and intensity many prominent French Canadians expressed dissatisfaction with their status within Confederation and began asking that Quebec be given more autonomy as a province and that French be given greater recognition throughout Canada. In 1963 Lester Pearson's minority Liberal government established a Royal Commission on Bilingualism and Biculturalism to examine this question. Four years later, after the Centennial celebrations, Mr. Pearson proposed a series of federal-provincial discussions to examine and reform the constitution in general. This task was continued under the direction of his successor, Pierre Elliott Trudeau, whose Liberal party was given a majority in the general election of 1968.



The original campsite of Pine Point Mines Ltd. at Great Slave Lake, NWT.

The first four years of the Trudeau government saw continued, but ultimately unsuccessful, constitutional negotiations. In October 1970 the government responded to the kidnapping of a British diplomat, and the kidnapping and murder of a Quebec Cabinet Minister, by the *Front de la Libération du Québec* by proclaiming the War Measures Act. Some changes in foreign policy were designed to affirm Canadian sovereignty and reduce the country's military commitment in Europe. Increasingly, however, economic problems took precedence over all others with inflation and unemployment creating serious difficulties. In October 1972 the electorate returned a minority government. During the next 18 months the Trudeau government managed to remain in power, generally supported by the New Democratic Party. It attempted to reduce US influence on many aspects of Canadian life, evolve new fiscal and social policies and, perhaps above all, to grapple with the domestic implications of the world energy crisis. In July 1974, the voters restored political stability by returning a majority Liberal government, still led by Pierre Elliott Trudeau. That government assumed the responsibility of running a country where the cultural problems of the 1960s were gradually being replaced by economic concerns, especially unemployment in an inflationary economy, declining exports, shifting demographic and immigration patterns, and conflict between the federal and provincial governments over the regulation of petroleum and natural gas prices. In turn that has meant, at least in part, that the tension in the Canadian federal system has shifted from the autonomous concerns of Quebec to the economic preoccupations of the western provinces, especially oil-rich Alberta.

Population

Canada's population as of June 1, 1974, was estimated at 22,446,000 (Table 1). With an area of 3,852,000 square miles, the over-all population density in Canada is 5.8 persons per square mile. Referring to the mid-1973 figures published in the Demographic Yearbook of the UN, Canada's population is the 31st largest among the 220 nations of the world, her territory the second largest (after that of the USSR), and her over-all population density the 13th lowest.

The growth rate of Canada's population was estimated at 1.6 per cent for 1973-74 and at 1.3 per cent per annum for the three-year period 1971-74 (unless otherwise specified, all computations refer to census years, i.e. June 1 through May 31). In terms of absolute numbers, these figures reflect a yearly addition of between 250,000 and 350,000 persons to the Canadian population. To put these data in an international context, it should be noted that for the calendar years 1970-73, the UN estimated the growth rate of the world population at 2.1 per cent per annum. It should also be noted that the Canadian growth rate cited above for 1971-74 is well below the intercensal rates experienced in Canada since 1951 (for example, the rate of 2.8 per cent per annum for 1951-56).

Table 1. Population and land area, by province, 1961-74¹

Province or territory	Land area	1961		1971		1974		Popula- tion density ²
	%	'000	%	'000	%	'000	%	
Newfoundland.....	4.1	458	2.5	522	2.4	543	2.4	3.5
Prince Edward Island.....	0.1	105	0.6	112	0.5	117	0.5	58.5
Nova Scotia.....	0.6	737	4.0	789	3.7	813	3.6	38.7
New Brunswick.....	0.7	598	3.3	635	2.9	662	2.9	23.6
Quebec.....	15.4	5,259	28.8	6,028	27.9	6,134	27.3	10.3
Ontario.....	10.7	6,236	34.2	7,703	35.7	8,094	36.1	19.6
Manitoba.....	6.5	922	5.1	988	4.6	1,011	4.5	4.0
Saskatchewan.....	6.5	925	5.1	926	4.3	907	4.0	3.6
Alberta.....	6.6	1,332	7.3	1,628	7.5	1,914	7.6	7.5
British Columbia.....	9.5	1,629	8.9	2,185	10.1	2,395	10.7	6.5
Yukon Territory and Northwest Territories.....	39.3	38	0.2	53	0.3	57	0.3	0.03
Canada.....	100.0	18,238	100.0	21,568	100.0	22,446	100.0	5.8

¹Based on census data for 1961 and 1971, and on estimates for 1974.

²Persons per square mile.

Population growth reflects the combined effect of the components of population change — births, deaths, immigration and emigration. The trends in Canada in recent years have been characterized by declining birth rates and fairly stable death rates (Table 2). Consequently, the rate of natural increase has fallen considerably: the figure of 8.4 per 1,000 population for 1971-74 is almost half that recorded in 1961-66. Immigration rates show a 1971-74 average which is slightly lower than that experienced during the preceding intercensal period, 1966-71. However, since

emigration rates have fallen sharply in recent years, one finds a relatively high level of net migration. Thus, the 1971-74 net migration rate of 4.9 per 1,000 population is higher than that recorded in the preceding intercensal periods 1961-66 and 1966-71; furthermore, in 1971-74 net migration contributed 37 per cent of the total population growth, a proportion which is the highest recorded in Canada in any intercensal period except for 1901-11.

Canada's 10 provinces and two territories differ markedly with regard to their area, population size and population density (Table 1). The areas of the various provinces extend from 2,000 square miles (less than 0.1 per cent of Canada's total area) in Prince Edward Island and 21,000 (0.6 per cent) in Nova Scotia, to 595,000 (15 per cent) in Quebec and 1,512,000 (39 per cent) in the two territories. The provincial populations, as of June 1, 1974, ranged from 57,000 (0.3 per cent of the total population) in the territories and 117,000 (0.5 per cent) in Prince Edward Island to 6,134,000 (27 per cent) in Quebec and 8,094,000 (36 per cent) in Ontario. The corresponding population densities varied from 0.03 persons per square mile in the territories and 3.5 in Newfoundland, to 38.7 in Nova Scotia and 58.5 in Prince Edward Island; the comparable national mean was 5.8 persons per square mile.

A more global view of the geographic distribution of Canada's population may be obtained from the regional figures. As of June 1, 1974, the Atlantic Provinces (Newfoundland, Prince Edward Island, Nova Scotia and New Brunswick) accounted for roughly one Canadian in 10, Quebec for one in four, Ontario for one in

Table 2. Components of population change: Canada, 1961/66, 1966/71, and Canada and provinces, 1971/74¹

Province and period	Births	Deaths	Natural increase	Immigration	Emigration	Net International migration	Net internal migration	Total change
Newfoundland	23.5	6.2	17.3	1.6	5.6	-3.9	-0.6	12.8
Prince Edward Island	17.3	9.0	8.3	2.1	1.8	0.3	6.2	14.9
Nova Scotia	16.9	8.6	8.3	2.7	1.7	1.0	0.7	10.1
New Brunswick	18.1	7.9	10.2	2.3	1.6	0.7	3.1	14.0
Quebec	13.9	6.9	7.0	3.8	2.3	1.5	-2.7	5.8
Ontario	15.8	7.5	8.3	10.6	2.4	8.2	-0.1	16.5
Manitoba	17.3	8.2	9.1	6.0	0.9	5.1	-6.6	7.6
Saskatchewan	16.6	8.3	8.3	1.9	0.9	1.0	-16.3	-7.0
Alberta	17.6	6.5	11.1	6.1	0.9	5.2	0.8	17.2
British Columbia	15.0	7.9	7.1	10.6	2.1	8.5	15.1	30.7
Yukon Territory and Northwest Territories	30.8	6.6	24.2	4.9	..	..	..	22.4
Canada	1971/74	15.8	7.4	8.4	7.0	2.1	4.9	13.3
	1966/71	17.9	7.4	10.5	8.6	4.1	4.5	14.9
	1961/66	23.5	7.6	15.9	5.6	2.9	2.7	18.6

¹ Population data based on census figures for 1961, 1966 and 1971, and on estimates for 1974; births, deaths and immigration based on registration statistics; emigration and net internal migration based on estimates. Rates per 1,000 population.

.. Not available.



three, the Prairie Provinces (Saskatchewan, Manitoba and Alberta) for one in six, British Columbia for one in 10 and the Yukon Territory and Northwest Territories combined for one in 400.

The provinces and territories also differed with regard to their rates of growth (Table 2). For the intercensal period 1971-74, British Columbia and the territories experienced the highest growth rates, while Quebec and Saskatchewan experienced the lowest (Saskatchewan, in fact, was subject to a negative growth rate). Additionally, the growth rates in Alberta and Ontario were noticeably higher than the national level, those in Manitoba and Nova Scotia noticeably lower, and those in Prince Edward Island, New Brunswick and Newfoundland close to the national level (i.e. within 15 per cent of it).

This interprovincial variation reflects the differential levels of natural increase, net international migration and net internal migration (Table 2). In British Columbia, for example, the 1971-74 rate of population increase was 30.7 per 1,000 population per annum (compared with the national rate of 13.3). This figure represents the sum of the rates of natural increase, 7.1 (national rate: 8.4), net international migration, 8.5 (national rate: 4.9), and net internal migration, 15.1. The fast growth in British Columbia, therefore, was mainly a consequence of internal and international migrations, and contrasted sharply with the below-average natural increase in this province.

Generally, the 1971-74 interprovincial differences in natural increase were relatively small, and are hence considered a secondary factor in generating interprovincial variation; in most provinces the 1971-74 rates of net international migration in the territories, Newfoundland and Alberta, however, are exceptions. International migration, on the other hand, was a significant contributor to this interprovincial variation; in most provinces the 1971-74 rates of net international migration were either considerably above the national mean (as in Ontario and British Columbia) or considerably below it (as in Newfoundland and Prince Edward Island); Alberta and Manitoba, with rates close to the national mean, are exceptions. As to internal migration, this factor was a significant contributor to differential population change in about half of the provinces, the prominent examples being Saskatchewan as a "net loser" and British Columbia as a "net gainer".

Interprovincial differences in growth rates, such as those mentioned above, are gradually changing the geographic distribution of the Canadian population. In 1961, for example, the Atlantic region accounted for 10.4 per cent of Canada's population, compared with 9.4 per cent in 1974; the Prairie region and Quebec have also been subject to a decline in relative size (Table 1). On the other hand, in 1961 British Columbia accounted for 8.9 per cent of the population, compared with 10.7 per cent in 1974; Ontario and the territories have also been subject to an increase in relative size. Significantly, while the Prairie region as a whole declined in relative size, the province of Alberta recorded an increase over the period 1961-74.

Another major aspect of the geographical distribution of Canada's population concerns the high and increasing concentration in a small number of census metropolitan areas (CMAs). The 22 CMAs (according to the 1971 definition) accounted for 55 per cent of the population in 1973, compared with 51 per cent in 1961 (Table 3). The seven largest CMAs alone accounted for 40 per cent of the population in 1973, compared with 36.5 per cent in 1961. There are, however, indications that the growth rate of the CMA population has levelled off in recent years. Thus, during the intercensal periods 1961-66 and 1966-71, the growth rate of the population in the CMAs exceeded the national mean by about 50 per cent; for 1971-73, on the other hand, the estimated growth rate of the CMA population was roughly equal to the national mean. None the less, some CMAs are still experiencing exceptionally high growth rates; a notable example is the CMA of Edmonton with a 1971-73 rate of increase of 2.2 per cent per annum, compared with the national mean of 1.2 per cent.

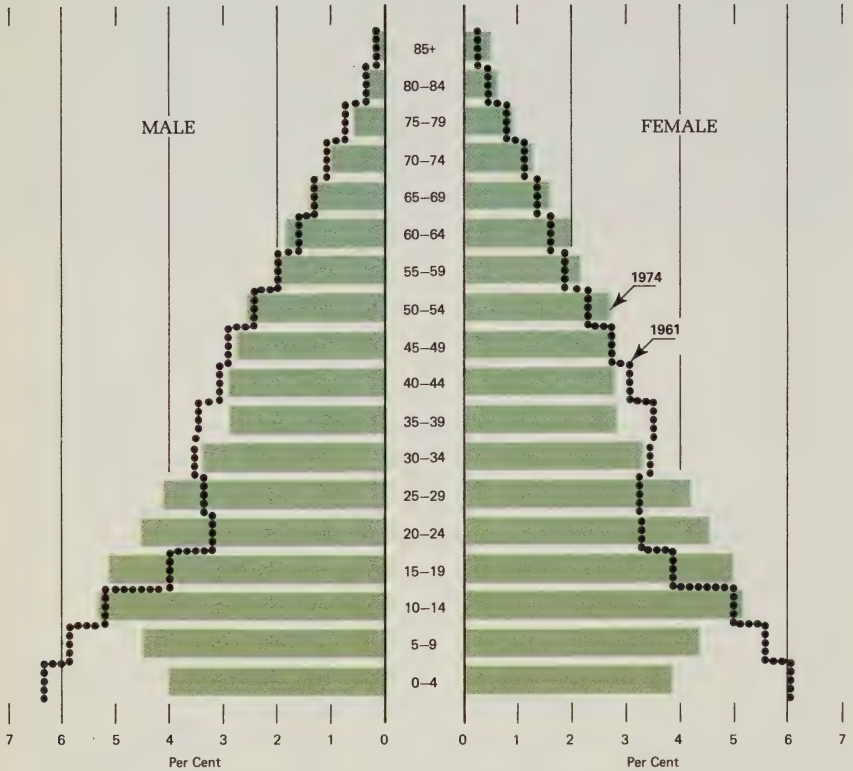
Table 3. Population and mean annual percentage increase of selected census metropolitan areas, 1961-73¹

Census metropolitan area (CMA)	1961	1966	1971	1973	Mean annual		
	Census	Census	Census	Estimate	increase, percentage		
					1961/66	1966/71	1971/73
Canada	18,238	20,015	21,569	22,095	1.9	1.5	1.2
Census metropolitan areas (CMAs)	9,293	10,684	11,875	12,166	2.8	2.1	1.2
Percentage of Canadian population	51.0	53.4	55.1	55.1			
Seven largest CMAs ²	6,657	7,714	8,591	8,793	2.9	2.2	1.2
Percentage of Canadian population...	36.5	38.5	39.8	39.8			
Percentage of CMAs population	71.6	72.2	72.3	72.3			
Montreal	2,216	2,571	2,743	2,775	3.0	1.3	0.6
Toronto	1,919	2,290	2,628	2,692	3.5	2.7	1.2
Vancouver	827	933	1,082	1,116	2.4	3.0	1.5
Ottawa-Hull	457	529	603	619	2.9	2.6	1.3
Winnipeg	477	509	540	560	1.3	1.2	1.8
Edmonton	360	425	496	518	3.3	3.1	2.2
Hamilton	401	457	499	513	2.6	1.8	1.4

¹Population figures indicate 1,000s.

²CMAs with a 1973 population in excess of 500,000, as listed in the last lines of the table.

The Age Composition of Canada's Population, 1961 and 1974



All the Canadian censuses until 1971 recorded an excess of males over females. However, an analysis of the general trend and its determinants indicated that in the long run females would outnumber males. In the 1971 Census, the predominance of males was two per 1,000 females; the population estimates for 1972 show an even smaller excess, while the estimates for 1973 and 1974 reflect a female-dominant population with an excess of one female per 1,000 males.

Over the last decade, in the wake of the birth rate decline, Canada's population has been subject to a decline in the proportion of children (ages 0-14) and to an increase in the proportion of adults (15-64) and aged persons (65 and over). This trend is presented most dramatically in terms of "aged-to-child ratios": in 1974 the population included 31 aged persons per 100 children, compared with 22.5 per 100 in 1961. Similarly, there were 42 children per 100 adults in 1974, compared with 58 per 100 in 1961. A more detailed picture concerning the 1961-74 changes in age composition is conveyed by means of the accompanying chart. The major changes, according to this chart, concern the "contraction" of the age groups 0-4 and 5-9, and the "expansion" of the age groups 15-20, 20-24 and 25-29.

The impact of the changes in age composition is appreciated in particular when specific "functional age groups" are examined. For example, the relative size of the school age population (6-13) declined from 17 per cent of the population in 1961 to 15 per cent in 1974; this decline constitutes a significant factor in planning educational facilities. Similarly, the relative size of the junior working ages (20-34) increased from 20 per cent of the total population in 1961, to 24 per cent in 1974; this trend has had profound implications vis-à-vis the labour market in general and unemployment in particular.

Table 4. Percentage distribution by major categories of birthplace, ethnicity, religion and language, Canada, 1971

Birthplace		Ethnic group		Religious denomination	
	%		%		%
Canada	84.7	British	44.6	Roman Catholic	46.2
Other countries	15.3	French	28.7	United Church	17.5
United Kingdom	4.3	German	6.1	Anglican	11.8
Italy	1.8	Italian	3.4	No religion	4.3
United States	1.4	Ukrainian	2.7	Presbyterian	4.0
All others	7.8	All others	14.5	Lutheran	3.3
				Baptist	3.1
				All others	9.8
Total	100.0	Total	100.0	Total	100.0
Mother tongue		Home language		Official language	
	%		%		%
English	60.2	English	67.0	English only	67.1
French	26.9	French	25.7	French only	18.0
German	2.6	Italian	2.0	Both English	
Italian	2.5	German	1.0	and French	13.4
All others	7.8	All others	4.3	Neither English	
				nor French	1.5
Total	100.0	Total	100.0	Total	100.0

Canada's population is markedly heterogeneous with respect to birthplace, language, ethnicity and religious denomination. This heterogeneity is reflected, in the existence of numerous minority groups, alongside a small number of main categories which include the greatest share of the population. In the case of birthplace, for example, the 1971 Census data indicated that 18.3 million Canadians (85 per cent of the population) were Canadian born, and 3.3 million (15 per cent) were foreign born. Within the latter group, about two out of three persons were born in either the UK (28 per cent), Italy (12 per cent), the US (9 per cent), Germany (6 per cent), Poland (5 per cent), or the USSR (5 per cent). Numerous other countries of birth account for the remaining 1.1 million persons (34.5 per cent of the foreign born, or about 5 per cent of the total).

The 1971 distribution by birthplace reflects the cumulative effect of immigration over the last half century and contrasts sharply with current immigration patterns. An example is provided by referring to the immigrants who entered Canada during the calendar years 1973-74 (about 403,000). The most common places of last

permanent residence which these immigrants reported were: the UK (65,000, or 16 per cent of all immigrants), the US (52,000, 13 per cent), Portugal (30,000, 7.5 per cent), Hong Kong (27,000, 7 per cent), India (22,000, 5.5 per cent) and Jamaica (21,000, 5 per cent); together, these six groups accounted for 54 per cent of the 1973-74 immigrants (Table 5). While these data on country of last permanent residence are not entirely comparable with the birthplace data cited, they none the less reflect the difference between the origin of current and past immigration waves. Countries such as the UK and the US have been the source of major immigration waves to Canada both in the past and currently. In contrast, nations such as Portugal, Hong Kong, India and Jamaica which in the past contributed but few immigrants, are currently contributing substantially. Other nations, such as Germany and Italy, sent large immigration waves during one period or another in the past, but in recent years their relative contribution has declined considerably.

Table 5. 1973/74 Immigrants by country of last permanent residence (6 major countries)¹

Country of last permanent residence or birthplace	1973/74 Immigrants (calendar years)		1971 Population (foreign born only)	
	No.	%	No.	%
United Kingdom.....	65,351	16.2	933,040	28.3
United States	51,783	12.9	309,640	9.4
Portugal.....	29,816	7.4	71,540	2.2
Hong Kong.....	27,366	6.8	2	2
India.....	22,071	5.5	38,875	1.2
Jamaica.....	20,649	5.1	25,295	0.8
All others	185,629	46.1	1,917,140	58.2
Total	402,665	100.0	3,295,530	100.0

¹1971 Census population reporting the corresponding birthplace.

²The 1971 birthplace figures for Hong Kong were reported in the category "Other Commonwealth" and are, therefore, unavailable separately.

The composition of Canada's population by language group may be examined from the viewpoints of mother tongue, "home language" (i.e. the language most often spoken at home) and official language. In the 1971 Census, English was reported as mother tongue by 60 per cent of the population and French by 27 per cent. By rank order, these were followed by German (2.6 per cent) and Italian (2.5 per cent). Numerous other mother tongue groups accounted for the remaining 8 per cent of the population. Similarly, English was reported as "home language" by 67 per cent of the population and French by 26 per cent; Italian accounted for 2 per cent, German for 1 per cent and all other languages for the remaining 4 per cent.

Knowledge of both the official languages of Canada was reported by 13.4 per cent of the population. (In the decennial censuses of 1931 to 1961, the bilingual component of the population comprised between 12.2 per cent and 12.8 per cent. The 1971 proportion, therefore, suggests a slight increase over figures recorded previously.) Knowledge of English as the only official language was reported by 67 per cent of the population and of French by 18 per cent; the remaining 1.5 per cent reported knowledge of neither official language.

Bilingualism

Throughout Canada's history the existence of two major linguistic groups has been one of the dynamic forces that have shaped the country and contributed much to its unique character. To safeguard this valuable national heritage, the federal government has taken a number of steps to ensure the equal participation of both English-speaking and French-speaking Canadians in Canada's future.

In 1963, it appointed a Royal Commission on Bilingualism and Biculturalism whose purpose was to inquire into a wide range of questions relating to language and culture in Canada. Following the publication of the first volume of the Commission's report, the federal government introduced an Official Languages Bill in the House of Commons in October 1968. After careful study and discussion the final version of the Bill was unanimously adopted in July 1969 and came into force in September of the same year.

Section 2 of the Official Languages Act stipulates that "the English and French languages are the official languages of Canada" and that they "possess and enjoy equality of status and equal rights and privileges as to their use in all the institutions of the Parliament and Government of Canada."

In addition, the Act contains three main sections. First, a number of clauses ensure that all public documents issued by any federal authority are produced in English and French. Second, the Act specifies that "bilingual districts" will be created. In these districts, and in certain other situations, federal government services will be available to the public in both official languages. Finally, the Act outlines the responsibilities of a Commissioner of Official Languages whose job it is to ensure compliance with the spirit and the intent of the Act.

The following government departments and agencies are responsible for official languages policies and programs: the Treasury Board, the Department of the Secretary of State, the Public Service Commission and the National Capital Commission.

The Treasury Board

The Treasury Board is responsible for the administration of the Official Languages Act and for the implementation of the government's official languages policy and programs within the Public Service. Excluded from this mandate are the programs entrusted by Parliament, under the Public Service Employment Act, to the Public Service Commission and, under the Translation Bureau Act, to the Bureau of Translation.

The Official Languages Branch of the Treasury Board Secretariat has as its main objectives to ensure that every Canadian is able to communicate with, and to receive services from the federal government and its agencies in the official language of his or her choice and that federal public servants can, as a general rule, work in the official language of their choice. The Branch also develops and ensures the communication, implementation and effective monitoring of the application of the Official Languages Act and of official languages policy and programs within the Public Service. The Branch also provides advice to departments and agencies on matters related to official languages policy and programs.

To carry out its mandate, the Branch is divided into three divisions: Policy and Planning; Operations; and Training and Information Development.

The Policy and Planning Division identifies, develops, recommends and issues policies and guidelines related to the implementation of official languages within the federal Public Service. It also plans, develops and recommends related programs and procedures required to give effect to official languages policy. This includes all matters related to the Treasury Board guidelines on language requirements of positions, French language units, the provision of work instruments and design of measures required to provide for a greater use of French within the Public Service as well as measures related to achieving the full participation of both English-speaking and French-speaking communities within the Public Service. It is also responsible for establishing a statistical analysis and monitoring system to evaluate progress toward achieving the government's official languages objective and the implementation by departments of recommendations made by the Commissioner of Official Languages.

The Operations Division assists departments and agencies in monitoring the implementation of the Treasury Board guidelines on language requirements of positions and other official languages policies and programs. It also analyzes requests for man-years and other resources required to support departmental programs carrying out the government's official languages policy. Finally, it maintains liaison with the staff associations through the National Joint Council.

The Training and Information Development Division ensures the co-ordination, development and provision of training and information programs associated with the implementation of the Official Languages Act and the official languages policy and programs.

Department of the Secretary of State

The Department of the Secretary of State has a general responsibility for the development of bilingualism in education and in the private sector, and a special responsibility, through its Translation Bureau, for meeting translation and interpretation requirements. The Department also has a program of support for minority official language groups which comes under the direction of the Citizenship Branch. This program is concerned with the linguistic and cultural development of official language communities in areas where they are established as minorities.

Language Programs Branch

A series of programs devoted to the development of bilingualism is administered by the Language Programs Branch of the Department of the Secretary of State. In March 1974, the Federal-Provincial Program for Bilingualism in Education, initiated in 1970, was renewed for a five-year period. This program is intended to increase the opportunity for Canadians of the majority official language group in each province to acquire a knowledge of the other official language and to increase the opportunity for Canadians of the minority official language group in each

province to be educated in their own language. Financial aid is offered to the provinces on the basis of the numbers of students engaged in these language programs. Provision is also made for various bursaries, awards and contributions to institutions at post-secondary and teacher-training levels and special projects on a cost-shared basis. Assistance is given to provincial governments and municipalities to provide services to the public in both official languages.

In the private sector various programs have been developed to encourage the adoption of improved methods for acquiring and using both official languages. These include technical advice to business and industry; assistance to voluntary associations for interpretation and translation; and the dissemination of research results, documents and information on bilingualism. In collaboration with other appropriate departments, the Department of the Secretary of State co-operates with other countries and international organizations on problems relating to institutional and individual bilingualism. These programs are all administered by the Language Programs Branch.

The Translation Bureau

The Translation Bureau provides translation and interpretation services in all languages as necessary for the proper functioning of Parliament, the government and its agencies, especially those services required for implementation of the official languages policy. It provides simultaneous interpretation of the proceedings of the House of Commons, of the Senate and of Parliamentary committees. When government departments and agencies require them, interpreters are sent by the Translation Bureau to national and international conferences held in Canada or abroad. The Translation Bureau organizes and encourages terminological projects, in co-operation with specialized institutions in Canada and abroad, in order to establish a bank of equivalent terms to keep abreast of current vocabulary in all disciplines and all relevant languages and to increase the efficiency of translation in the two official languages.

The Public Service Commission

Pursuant to the Parliamentary Resolution of June 1973, the Treasury Board guidelines on language requirements assigned or reaffirmed to the Public Service Commission, responsibilities for the determination of the level of language knowledge required of and possessed by candidates for bilingual positions; provision of language training; hearing of appeals against the results of language testing and language qualifications required in a competition; and, the review of the language knowledge of employees to ensure retention of language skills.

The Commission modified its language training system in 1974. The change has involved a greatly increased emphasis on continuous language training under which the public servants concerned can spend up to 52 weeks at language school without interruption. This change of technique was brought about to increase the effectiveness of language training and also to ensure compatibility with the language requirements of positions in the federal government service established by

the Treasury Board. Under an agreement with the Department of National Defence, the Public Service Commission is also responsible for the language training of Canada's military personnel. In addition, it conducts various specialized courses to meet particular needs. While its main training facilities are in Ottawa and Hull, the Public Service Commission also conducts regional language training operations in language schools in Halifax, Quebec City, Montreal, Winnipeg, Vancouver and Edmonton. Language training is also available to federal public servants through contract arrangements in Moncton, Fredericton, Toronto, Sudbury, North Bay, Regina and Banff.

National Capital Commission

Since December 1971, responsibility for the development of bilingualism in the National Capital Region, apart from the federal public service, has rested with the National Capital Commission. Its endeavours have included negotiations with the provinces of Ontario and Quebec in whose territories the National Capital Region is located to assure that the linguistic and cultural values of the Anglophone and Francophone communities are adequately reflected in the area. It collaborates with the regional and municipal governments and other local public authorities such as school boards to strengthen their bilingual capabilities. In co-operation with private business organizations, voluntary associations and individuals it encourages an equitable use of the two official languages and also seeks to make the National Capital Region a true reflection of the country.

Commissioner of Official Languages

The Official Languages Act of 1969, created the position of Commissioner of Official Languages for Canada. In consideration of Section 2, of the Act "it is the duty of the Commissioner to take all actions and measures within his authority with a view to ensuring recognition of the status of each of the official languages and compliance with the spirit and intent of this Act in the administration of the affairs of the institutions of the Parliament and Government of Canada and, for that purpose, to conduct and carry out investigations either on his own initiative or pursuant to any complaint made to him and to report and make recommendations with respect thereto as provided in this Act" (Section 25).

It follows from this section that the Commissioner exercises two functions, those of language ombudsman and linguistic auditor general. It should be noted that his powers can only be brought to bear in matters of federal jurisdiction.

Parliament has provided an ally, an ombudsman, to back up rights: The Commissioner of Official Languages. Appointed by both the House of Commons and the Senate for a seven-year term, the Commissioner has the duty to investigate complaints. If, in his opinion, a department or agency of the federal government has ignored language rights, he can and will make recommendations.

Multiculturalism

In October 1971, the Prime Minister announced the federal government's policy on multiculturalism. This announcement was the government's response to the recommendations of the Royal Commission on Bilingualism and Biculturalism which had examined the questions of cultural pluralism in Canada and the status of the country's various cultures and languages. When introduced in the House of Commons, the principle of multiculturalism within a bilingual framework was supported by leaders of the opposition parties and accepted as the most suitable means of assuring the cultural freedom of Canadians. The new policy gave public recognition for the first time to the valuable contribution made to Canada by its many and diverse cultural groups and promised continuing support and encouragement to these groups.

In November 1972, the position of Minister of State responsible for Multiculturalism was created to administer the policy. The following May, the Canadian Consultative Council on Multiculturalism was established as an advisory body to the Minister. One hundred persons, chosen from a cross-section of Canada's many ethno-cultural communities and from all walks of life, form this advisory body.

Implementation of the government's multicultural policy is carried out by the Multicultural Program in the Department of the Secretary of State and a number of federal cultural agencies which have developed special programs designed to promote better understanding of Canada's ethno-cultural groups and to provide these groups with specialized services.

Polish youth ensemble Iskry in Winnipeg, Man.





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**Ethnic Dancers at Ottawa's
Multicultural Festival.**

1. Israeli dancers from Ottawa.
2. Jewish dancers from Manitoba.
3. Indian dancers from Saskatchewan.
4. Serbian dancers from
Hamilton, Ont.
5. Turkish dancers from Quebec.
6. Ukrainian dancers from Manitoba.
7. Filipino dancer from Ontario.



The Program awards funds to groups for projects that promote an awareness of Canada's multicultural diversity and encourages Canadians to share their cultural heritage with their fellow citizens, and for projects that support the maintenance and development of ancestral cultures and languages. The Multicultural Centres Program supports the operating costs of community multicultural associations and centres which encourage cultural exchange between various ethnic groups and consequently increases the awareness and sensitivity of groups to each other.

In the field of third-language teaching, grants are provided to ethnic organizations for the production of texts and audio-visual aids oriented to the Canadian point of view. This is a consequence of surveys indicating a serious lack of language teaching materials relevant to the needs of Canadian children.

The Canadian Identities Program established in the spring of 1973 as a component of the Multicultural Program spans most areas of cultural expression and is designed to increase the awareness of different lifestyles and cultural traditions within our society through programs dealing with folk arts, festivals, theatre, crafts, research and publishing.

In the area of multicultural studies, the Multicultural Program commissions professional scholars to write histories of ethnic groups in Canada and undertake research related to its multicultural programs. The Program is also involved in the establishment of co-ordinating service for academics pursuing ethnic studies and in the development of a visiting professors' program and a visiting lecturers' program in Canadian universities.

With regard to services for adult immigrants, the Multicultural Program administers funds, under the terms of federal-provincial agreements, to underwrite provincial costs for official-language teaching and orientation programs. To inform the ethnic segment of Canada's population, having a limited command of English or French, about federal activities and programs affecting them, the Multicultural Program, together with other government departments and agencies, is taking advantage of the ethnic media to provide details on old age pensions, immigration regulations, consumer protection and other information.

Several federal cultural agencies have established special programs in support of the multicultural policy. The National Film Board (NFB) is producing a new series of films and multi-media materials on the history, culture and lifestyles of ethno-cultural groups in Canada. The Board also prepares and distributes ancestral-language versions of NFB films originally produced in French and English. In addition to collecting artifacts and data on ethno-cultural groups in Canada, the National Museum of Man administers a related program of displays, travelling exhibits and publications. The National Ethnic Archives, as a component of the Public Archives, collects, catalogues and preserves materials of historical significance relating to Canada's cultural minorities. It seeks to create a greater awareness among Canada's many cultural communities of the importance of and need for documenting their heritage and preserving all types of archival materials in order to ensure that the many facets of Canadian history may be fully recorded.

The multilingual biblioservice of the National Library administers a program to acquire and circulate books in languages other than English and French through the public library system.

Religion

Religion has been an important influence in Canada's history since the earliest days of discovery. Not just the search for riches or the lure of exploration, but a sense of mission, to Christianize the Indians, drew Frenchmen to the New World. Later settlers, both French- and English-speaking, looked to their church as a centre of social stability, of community as well as religious activities, and of the consolations of faith in the face of adversities, sufferings and despair. The institutional church still provides leadership and guidelines for living to many Canadians, and most would agree that the Judaeo-Christian values carried from Europe influence their national life.

Although French Protestants were active in the early fur trade of New France, religious and economic rivalries led to the banning of all but French Roman Catholics from the colony in 1627. Before settlers arrived in any numbers, however, the Roman Catholic Church was already operating schools and hospitals as part of its great missionary effort to convert the Indians. One of the most heroic stories in Canada's past is that of the 17th century mission to the Hurons on Georgian Bay where Fathers Jean de Brébeuf and Gabriel Lalemant died at the hands of Iroquois natives. Five other Jesuits killed in the course of their mission to the Hurons have also been recognized as martyr saints. From similar missionary enterprise in that century grew the great city of Montreal.

When the British acquired Acadia in 1713 and New France in 1763, the new rulers guaranteed to the Roman Catholic population freedom to practise their

Evangeline Choir in Grand Pré, NS.



religion. A policy encouraging a "Canadian" Catholic Church was confirmed by the Quebec Act of 1774 which gave official recognition to that church. This pattern of religious unity inherited from New France was, however, soon altered by the predominantly Protestant Loyalists. Their arrival meant that from that time forward Canada would be religiously pluralistic. This religious diversity and the growing spirit of equality eventually doomed to failure the post-revolutionary plan to make Anglicanism the official religion of the colonies. Vast land endowments and special political and legal privileges for the Church of England had all disappeared before Confederation as voluntarism—the separation of church and state—became the unwritten law and universal practice in Canada.

Canadians have come literally from a hundred nations, and their different faiths are now represented in this country of their adoption. The larger churches have established "ethnic" parishes where the temporary use of their mother tongue helps ease the immigrants' entrance into Canadian culture, but in ethnic churches such as the Eastern Orthodox community where the mother language is an essential part of religious services, the cultural transfer from the Old World to the New is sometimes more lengthy and difficult. Historically the churches of England and Scotland too could be considered ethnic churches, but in Canada they have had the advantage of using one of the two "charter" languages.

While the great majority of Canadians are Christian by heritage, and in times past have often referred to Canada as a "Christian nation," other faiths are also represented in the religious mosaic of the country. European Jews have brought both the major Judaic religious traditions with them and are organized in orthodox, conservative and liberal synagogues. Judaism in Canada has remained essentially an urban phenomenon, with 77 per cent of its followers living in Montreal and Toronto alone. Since the 1940s the Canadian Council of Christians and Jews has worked for greater understanding between these two faiths but it has also promoted civil rights and the end of religious prejudice through education. From Asia other recent immigrants have introduced Islam, Hinduism, Buddhism, Sikhism, and one of Christianity's oldest branches, the Coptic Church of Ethiopia, now has a congregation in Toronto.

Soon after Confederation nationalists like George M. Grant, principal of Queen's University, voiced their dream of reuniting all Christians in a single Canadian church. Their ideal of Protestant-Catholic reunion seemed an impossibility until Vatican II, but in the intervening century Canadian Protestant denominations did take long strides toward church union. In 1875 all Presbyterian bodies in Canada were joined into a single church, and nine years later all Methodist groups were similarly reunited. These denominational unions led immediately to discussion of an interdenominational union of Anglicans, Methodists, Presbyterians, Congregationalists and Baptists. Not until 1925, however, and then only after bitter controversy divided the Presbyterian church, was a United Church achieved that included Methodists, Presbyterians and Congregationalists only.

The United Church of Canada, a unique experiment in interdenominationalism and Canada's largest Protestant denomination, has recently merged with the smaller Evangelical United Brethren, and since 1944 has been discussing union with the Anglican Church and the Disciples of Christ. Such a union would contain nearly 30 per cent of Canada's population, and since Roman Catholics make up 46 per cent,



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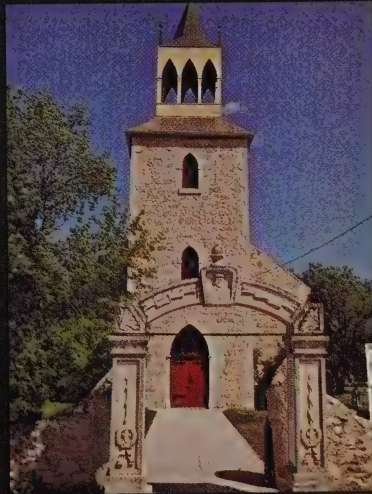
1. Wesleyan Church,
Woodstock, NB.
2. Cathédrale du Christ-Roi,
Gaspé, Que.
3. Mormon Tabernacle at
Cardston, Alta.
4. Roman Catholic Cathedral,
London, Ont.
5. The Parish Church of
St. Andrew, Winnipeg,
Man.



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three out of every four people in the country would then belong to these two huge churches. The three next largest denominations — Presbyterians, Lutherans and Baptists—claim another 12 per cent of the population so that nearly nine of every 10 Canadians would be members of just five churches — the remainder would be divided among more than 30 other denominations, as well as sects and cults. Thus, while the Canadian religious scene is often called pluralistic, in fact it has increasingly tended toward fewer and bigger “mainline” churches.

Members of Canada’s larger churches—Roman Catholic, United and Anglican—are found in every province but the smaller denominations often reflect a regional concentration that stems from the pattern of settlement or from particular religious events in Canada’s history. The Presbyterian Church in Canada is predominantly an urban and Ontario institution because of the schism caused by the union of 1925. Canadian Baptists number only 667,000 and are mainly in the Maritimes where they separated from the Congregationalists as a result of an 18th century religious revival. Over the past two centuries Canada’s tradition of religious freedom has attracted many small religious bodies that have suffered persecution in other lands. These have often settled here in close communities to preserve their religious and folk ways. Among the earliest of such groups were the Quakers, Mennonites, Tunkers and Moravians; more recent arrivals are the German-speaking Hutterites and the Doukhobors from Russia.

During the 19th century rapid and widely dispersed settlement absorbed most of the resources of the churches as they tried to reach these scattered flocks. Where the Catholic Church had earlier provided schools, hospitals, orphanages and asylums in the more compact settlement of New France, it was now left to the state to develop such social agencies in the rest of Canada so that the work of the churches, particularly the Protestant churches, was largely limited to providing exclusively religious help.

Despite this growth of the welfare state and its separation from the churches, Canadians have always believed that religion and secular life are necessarily connected. The organized churches have acted as the conscience of the state and have lobbied with some success on such issues as temperance, Sunday observance, birth control and abortion, working and living conditions, capital punishment and criminal law reform. They have also attempted to influence Canada’s external relations in connection with aid to underdeveloped countries and the nonrecognition of certain foreign governments. In Quebec the Roman Catholic Church continued to play an important role in politics until the Quiet Revolution of the 1960s, whereas the Protestant churches were strongest as social critics in the generation of mass immigration and industrialization immediately before World War I.

Since the early 1960s the relative decline in the influence of the older churches on national life has been complemented by the rise of various sects and cults whose radical beliefs and practices seem to have attracted a sizable following among a restless younger generation. The more traditional forms of religion may yet regain some of their former effectiveness thanks to the revival of religious conservatism that has recently appeared in the United States and Canada in reaction against the uncertainties, confusion and challenges of the previous decade.

JOHN S. MOIR

Arts and Culture

Theatre

Active theatre companies were functioning in every Canadian province during the 1974-75 season. They ranged from major established institutions such as the Stratford Festival and the Manitoba Theatre Centre to smaller organizations such as Toronto's Theatre Passe Muraille and Newfoundland's Mummern.

The season was one of reassessment for Canadian theatres — reassessment of goals and purposes, particularly with respect to the Canadian playwright. The presence of a vocal "Canada First" movement on the national theatre scene was expressed at a spring conference of theatre people at Montreal's Concordia University and a subsequent survey of the theatre scene during the 1974-75 season indicated that a growing number of Canadian plays are being staged across the country.

The French-speaking theatre of Quebec continued its policy of encouraging new Canadian plays. Théâtre du Nouveau-Monde in Montreal presented *Citrouille*, *Surprise-Surprise*, and *Manon Lastcall* during the 1974-75 season. In Quebec City, Théâtre du Trident staged *Salut Galarneau*.

Le Théâtre Populaire du Québec repeated a tour of les Îles-de-la-Madeleine and the Côte-Nord with *Au cœur de la rose* bringing theatre productions to new audiences. In Montreal, Le Théâtre du Rideau Vert and La Compagnie Jean Duceppe produced several plays during the season. A number of other companies staged many worthwhile and successful productions.

There were significant developments in the field of English-speaking theatre. Toronto remained the hub of activity — nurturing the new English-Canadian drama — with the Tarragon Theatre spearheading this activity. The highlight of the season for Tarragon was its success, against formidable financial odds, in completing James Reaney's trilogy, *The Donnelly's*. The first play in Reaney's dramatic

And Out Goes You, a satirical comedy by Sharon Pollock, at The Playhouse Theatre Centre of BC.



evocation of the notorious Donnelly feuds of 19th century rural Ontario was *Sticks and Stones*, produced by Tarragon in 1974. The final two plays, *The St. Nicholas Hotel* and *Handcuffs*, were presented during the 1974-75 season. Director Keith Turnbull and his troupe of young performers later announced plans to take the trilogy on tour across Canada. Part Two of the trilogy, *The St. Nicholas Hotel*, won the Chalmers award as the best new Canadian play of 1974. Tarragon's founder and artistic director William Glassco announced that Tarragon Theatre would not be producing during the 1975-76 season in order to chart the future direction of the theatre, but Tarragon ended the season on a high note with David French's new play, *One Crack Out*, a study of a poolroom hustler.

David French was one of several playwrights discovered by William Glassco. Another was David Freeman who followed his comedy-drama, *Creeps*, a study of cerebral palsy victims, with two other successful plays, *Battering Ram* and *You're Gonna Be Alright Jamie Boy*. Tarragon also introduced French-Canada's best-known playwright, Michel Tremblay, to English-speaking audiences. One of Tremblay's plays, *Hosanna*, proved a major success with Toronto audiences when staged by Tarragon. The production subsequently went to New York where it received some favourable reviews but poor box-office.

Other Toronto theatres also won attention with Canadian works. Toronto Workshop Productions' adaptation of Barry Broadfoot's depression study, *Ten Lost Years*, was so successful with Toronto audiences that it toured western Canada and was subsequently presented on television.

Toronto's Factory Lab recalled the all-Canadian comic books of the World War II era in a revue called *Hooray For Johnny Canuck*. Toronto's Theatre Passe Muraille examined urban sexual mores in a controversial revue, *I Love You Baby Blue*. The St. Lawrence Centre offered the world première of Robertson Davies' new play, *Question Time*, as well as a revival of Munroe Scott's historical drama, *Wu Feng*.

Canada's regional theatres continued to offer audiences balanced programming, consisting of representative works from the international repertoire, both commercial and non-commercial, as well as Canadian fare. Theatre London, in London, Ont. produced a number of original works.

Two theatres, the Neptune in Halifax and the Centaur in Montreal, staged major productions of *Hamlet*; the Centaur, its activities augmented by the opening of a second-stage operation, offered the première of *On The Job* by its playwright-in-residence, David Fennario. The setting was the packing room of a garment factory on Christmas Eve. The production subsequently moved to Ottawa's National Arts Centre for a successful run.

The theatre at the National Arts Centre highlighted its own season with two major revivals—one a bilingual production of John Coulter's *Riel*, the other a production of James Reaney's early play, *The Killdeer*.

The Fredericton Playhouse was the scene of the world première of a new version of *Frankenstein*, prepared by Maritime poet Alden Nowlan and Playhouse artistic director Walter Learning. The play was later produced at the Centaur in Montreal and the Playhouse Theatre Centre in Vancouver.

The Manitoba Theatre Centre's two stages offered a variety of fare including productions of Michel Tremblay's *Hosanna*, Carol Bolt's *Red Emma* and British playwright Peter Nichols' *Forget-Me-Not Lane*.

In Regina, the Globe Theatre maintained a full resident season as well as a heavy touring schedule. As a result, the Globe was able to claim that its adult and children's productions had been seen by nearly 10 per cent of the population. The Globe offered the première of *Bethune*, a new play by Rod Langley, dealing with the legendary Canadian doctor.

Saskatoon launched a new professional theatre, the Persephone, which attracted national attention with *Cruel Tears*, a country and western musical based on Shakespeare's *Othello* with book by Saskatchewan playwright Ken Mitchell and music by a popular Saskatchewan bluegrass group, Humphrey and the Dumprucks.

The Citadel Theatre in Edmonton announced the start of construction on a new multi-million-dollar theatre complex, scheduled for completion in 1976. In the interim, artistic director John Neville sought to broaden his audience by launching a second-stage series featuring such works as David Freeman's *Battering Ram*. The Citadel's main-stage series introduced Michel Tremblay's *Forever Yours, Marie-Lou* to the audience in Edmonton and offered productions of Chekhov's *Uncle Vanya* and Sheridan's *The Rivals*. Theatre 3 in Edmonton drew good houses with its final production of the season, *Orestes*.

The Citadel's production of *The Rivals* travelled to Theatre Calgary as part of an exchange program and Theatre Calgary reciprocated with its production of the Broadway comedy, *6 RMS RIV VU*. Theatre Calgary also offered a new production

Anne of Green Gables at the Charlottetown Summer Festival in Prince Edward Island.





Adam's Fall at Festival Lennoxville in Quebec.

of a hockey comedy, *Sudden Death Overtime*, by local playwright Gary Engler, as well as an in-the-round presentation of *The Threepenny Opera* staged by Theatre Calgary's artistic director Harold Baldrige.

Elsewhere in Calgary, Alberta Theatre Projects again offered a season of new Canadian plays in a rebuilt log opera house situated in the city's Heritage Park. This organization offered the première of *Roundhouse*, a new play about railway rivalry, written by Bonnie LeMay.

In Vancouver, the Arts Club Theatre staged such diverse fare as Anthony Shaffer's *Sleuth* and David Freeman's *You're Gonna Be Alright Jamie Boy*. The Playhouse Theatre Centre's artistic director staged *And Out Goes You*, a new satirical comedy by Sharon Pollock, whose historical drama, *Walsh*, had been presented the previous season at Theatre Calgary and Stratford. City Stage, a highly successful lunch-hour theatre, launched into full length evening productions.

The country's major festivals continued to flourish during the summer months. The Charlottetown Festival again offered the perennial *Anne Of Green Gables* and later sent the production on a national tour. The Stratford Festival's 1974 season included Molière's *The Imaginary Invalid*, directed by Jean Gascon; Shakespeare's *Love's Labour's Lost*, directed by Michael Bawtree; Shakespeare's *Pericles*, directed by Jean Gascon and Shakespeare's *King John*, directed by Peter Dews. Festival Lennoxville in Quebec presented Don Herron's *Adam's Fall*, and the Shaw Festival at Niagara-on-the-Lake offered two little-known Shaw plays, *Too True To Be Good* and *The Admirable Bashville*, as well as a new production of *Charley's Aunt* with artistic director Paxton Whitehead in the title role.



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Stratford Festival Productions.

1. *The Imaginary Invalid.*
2. *King John.*
3. *Pericles.*
4. *Love's Labour's Lost.*



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Dance

Canada's explosion in the arts manifests itself dramatically in the area of the dance. The country's three major companies — the National Ballet, the Royal Winnipeg Ballet and Les Grands Ballets Canadiens — all continued to report a constant growth in audience support.

In the spring of 1974, the National Ballet released figures concerning its most recent western tour. In Calgary, the National Ballet played a total of four performances and drew 84.5 per cent of capacity. Attendance figures of this nature were common throughout the western provinces. In eastern Canada, the National Ballet could claim even more impressive results with full-house attendance for its season at Ottawa's National Arts Centre.

The growing popularity of the dance is not a phenomenon confined to Canada. Observers of the scene say it is due to a variety of factors — a decline in audience resistance to a medium once deemed to be effeminate, the new glamour given the form by such international celebrities as Rudolf Nureyev and Dame Margot Fonteyn, and the freshness and innovation displayed by many younger dance companies. These factors were all reflected in the successful activities of the three major Canadian companies during the 1974-75 season.

For the National Ballet, the 1974-75 season was a time of consolidation and retrenchment. On July 1, 1974, David Haber was appointed artistic director, succeeding Celia Franca who remained with the organization as a teacher and coach. Despite budgetary difficulties, the organization enjoyed another successful season.

During the summer of 1974, the National Ballet enjoyed a well-received three-week engagement at the Metropolitan Opera House in New York with Rudolf Nureyev as featured artist. Highlight of the engagement was a revival of Nureyev's *The Sleeping Beauty*. Later in 1974, the National Ballet again won attention and high box-office grosses when Mikhail Baryshnikov joined the company in *Les Sylphides* in Toronto. *Coppelia*, directed by Erik Bruhn, had a mixed reception on tour but was followed by more triumphs in the spring of 1975, with a successful three-week European tour highlighted by Nureyev in *Don Juan*.

Innovation continued to keynote the Royal Winnipeg Ballet's 1974-75 activities. It attracted 10,000 subscribers to its home-based Winnipeg season, and also toured extensively despite budget cutbacks. A Latin American tour in the late spring of 1974 proved to be a critical and public success. Baryshnikov joined the company for a series of Winnipeg performances in the autumn of 1974, and in December John Neumeier's version of *The Nutcracker* was a Christmas favourite at Ottawa's National Arts Centre.

The Royal Winnipeg Ballet continued to add to its repertoire. An anti-war ballet, *The Green Table*, had its origins in Germany in the early 1930s when it was conceived by Kurt Jooss as a protest against the militarism of the day. Jooss' daughter, Anna Markard acted as overseer for the production.

The Montreal-based *Les Grands Ballets Canadiens* continued to break new ground as well. Brian Macdonald's first season as artistic director introduced his treatment of *Romeo and Juliet* with music by Harry Freedman performed by the Huggett Family. Part of Macdonald's choreography eschewed music and required the dancers to perform to voice-over readings of excerpts from the original Shakes-



The Green Table, an anti-war ballet with origins in Germany in the early 1930s, performed by the Royal Winnipeg Ballet.

pearean text. The company's 1974-75 season also featured an all-Canadian ballet based on the biblical *Song Of Songs*, and *The Lottery*, a ballet based on Shirley Jackson's novel with choreography set to the music of Stravinsky's *The Rite Of Spring*. Modern dance is also flourishing in Canada. The Toronto Dance Theatre has in its repertoire 52 original Canadian works and has received special praise from the critics. The Anna Wyman Dance Theatre enjoyed a generally successful first cross-country tour — with programs viewed in Ontario, entirely choreographed by Ms. Wyman.

Music

The symphony orchestra plays the dominant role on Canada's music scene. For the majority of Canadians, the symphonic concert provides the main contact with serious music.

Through the years, most of Canada's orchestras have recognized their special mandate which is not only to serve as custodians for the treasure house of 18th and 19th century music but to develop their audiences to greater numbers than ever before and to seek a constant widening of musical perspectives.

The responsibility is a heavy one and must be carried out under difficult economic conditions. It means seeking out new music — and, in particular, new Canadian music, encouraging the development of home-grown musicians and building audiences of the future through the scheduling of special school and young people's concerts.

These facts of musical life dominated the Canadian orchestral scene during the 1974-75 season. Arts in Canada are flourishing but financial problems exist. More than one Canadian orchestra was in financial distress, the most prominent being the Montreal Symphony. Orchestras in Calgary and Edmonton were also in distress, but their problems were temporarily solved by the decision of the Alberta government to guarantee their outstanding indebtedness.

There were bright spots on the scene, most significantly on the Pacific Coast where the Vancouver Symphony Orchestra actually began its 1974-75 season slightly in the black. Spearheaded by the efforts of its musical director Kazuyoshi Akiyama, the Vancouver Symphony Orchestra sold out its main-series subscriptions before the season commenced.

Ottawa's National Arts Centre Orchestra remained a pacesetter, providing a solid season of music at its home base under maestro Mario Bernardi and also undertaking a successful tour which took the group to such diverse locations as Wolfville, NS, Bloomington, Indiana and Tepozotlan, Mexico. The National Arts Centre Orchestra continued to pay special heed to Canadian music, in line with its policy of commissioning one or two new works each season. In the spring of 1975, it performed the première of *Turtle Rock*, a composition by Montreal composer Galt McDermott. Another Galt McDermott work, *Mass*, opened Hamilton Place, the new \$8 million performing arts centre in Hamilton, Ont.

Two major Canadian orchestras hired new conductors. The Toronto Symphony engaged Britain's Andrew Davis to succeed the late Karel Ancerl, and the Montreal Symphony hired Rafael Fruhbk de Burgos as successor to Franz-Paul Decker.

The Toronto Symphony successfully toured Europe in 1974 under guest conductor Kazimierz Kord. The Vancouver Symphony visited Japan in 1974, and will tour Canada in 1976.

There were renewed efforts to take symphonic music into smaller communities. In the West for example, conductor Maurice Handford took the Calgary Philharmonic to Southern Alberta points. During 1974, the Vancouver Radio Orchestra, under John Avison, toured Manitoba, Alberta and the Northwest Territories.

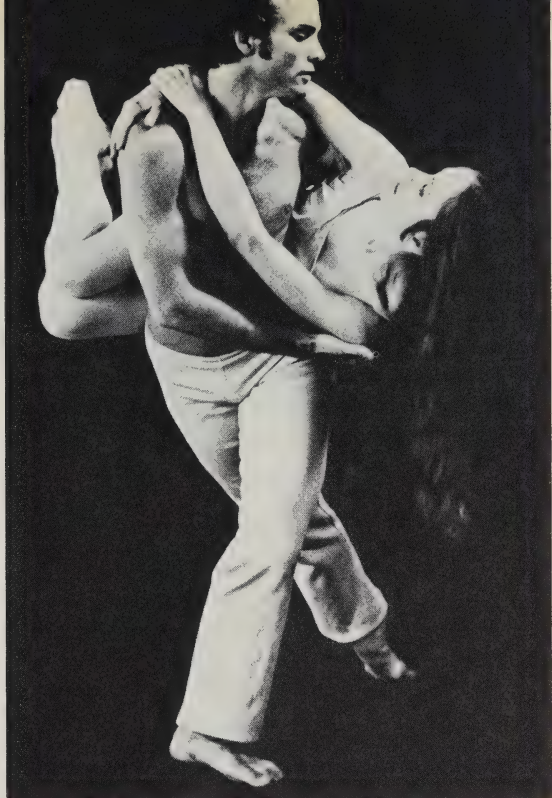
Chamber music continued to win new admirers — spearheaded by the Orford Quartet in the East and the One Third Ninth Trio in the West. The National Youth Orchestra reaffirmed its importance as a vital body for the training of young musicians, and in 1974 its efforts were complemented by the creation of a chamber-orchestra training program for young people at the Banff Centre.

The Festival Singers and the Mendelssohn Choir are among the numerous choral groups which have been well received. During the past season *Jeunes Chanteurs d'Acadie* competed with 30 excellent European choirs to win the International Eisteddfodd in Wales.

Opera

Opera is the most extravagant of the performing arts—and, it might be assumed, the most vulnerable at a time of inflation. Yet, the conclusion of the 1974-75 operatic season in Canada saw the genre more secure than ever and increasing its audiences tremendously.

Although the long-established Canadian Opera Company continued to fulfil its nation-wide mandate by complementing its Toronto-based season with a heavy touring schedule, another significant operatic development was taking place in western Canada with four professional opera associations located in Vancouver, Edmonton, Calgary and Winnipeg. The pacesetter continued to be the Vancouver Opera Association which launched its 1974-75 season with an enormously successful production of Donizetti's *Lucia di Lammermoor* and with Gail Robinson winning plaudits for her work in the title role.



Cantique des Cantiques by Les Grands Ballets Canadiens.

The Vancouver Opera Association closed its season by ignoring the gibes of local purist critics and honouring the Gilbert and Sullivan centenary with its run of *The Gondoliers*. Vancouver wrapped up its season in the knowledge that it would continue to attract national attention because of the appointment of internationally-renowned operatic conductor Richard Bonyngé as its new artistic director.

The Vancouver Opera faces the problems of all Canadian opera associations — lack of its own opera house, financial difficulties and inadequate rehearsal time. Although the situation will not be changed suddenly, the Association, like its counterparts in other parts of Canada, enjoys loyal and increasing audience support.

The popularity of opera with the general public grew rapidly during the 1974-75 season. The Calgary-based Southern Alberta Opera Association successfully presented *Madama Butterfly* in the autumn and *Faust* in the spring, and attracted such large audiences that officials decided to increase the number of performances from two to three for forthcoming productions. Alberta is unique in maintaining two financially solvent opera associations. The Edmonton Opera Association is the longer established of the two, and highlighted its 1974-75 season with a sumptuous production of *The Merry Widow*.



L'Heure espagnole by the Canadian Opera Company.

The youngest western organization, the Winnipeg-based Manitoba Opera Association, won an excellent public response with a mid-winter production of Puccini's *La Bohème*. The western organizations are all non-profit bodies, although they stage fully professional productions. Conscious of inflation, they continued to seek areas of co-operation and consolidation during the year.

The guiding influence is a body known as Opera West, an organization whose membership includes the Vancouver Opera Association, the Edmonton Opera Association, the Manitoba Opera Association and the Southern Alberta Opera Association. Each member group retains its artistic autonomy while working with fellow organizations toward effecting financial savings through the mutual pooling of sets, costumes and ideas and the occasional interchange of operatic productions.

The Canadian Opera Company's main season at the O'Keefe Centre in Toronto once again drew mixed critical reaction but positive audience response. The season, the final one under the artistic directorship of the pioneer in opera in Canada, Dr. Herman Geiger-Torel, was varied — Wagner's *The Flying Dutchman*, Bartok's *Bluebeard's Castle*, Gounod's *Faust*, Verdi's *La Traviata* and Ravel's *L'Heure Espagnole*. In addition to its Canadian artists, the Canadian Opera Company has secured the services of some internationally renowned artists — Jerome Hines, Mignon Dunn and William Wildermann.

Venturing in new directions, the Canadian Opera Company introduced a touring concept which sought to avoid the old-fashioned one-night stand in favour of a "music-festival" approach which toured a 39-member production of *La Bohème* and which allowed the company to be broken down into smaller groups—chamber ensembles, cantata choristers and soloists. These groups fulfilled smaller engagements and conducted workshops during their stay in a community. The purpose was to develop new audiences for opera and to give touring singers and musicians an opportunity to demonstrate their multi-faceted talents.

The one dark spot on the operatic horizon was the financial plight of *L'Opéra du Québec* which was due to cease operations in the spring of 1975 after a shortened season which saw productions of *La Bohème* and *Tristan Und Isolde*.

Canada still lacks a full-time opera company, apart from the Canadian Opera Company's small touring group, but despite this deficiency, the state of opera in most parts of the nation was generally healthy, both artistically and financially.

The Federal Government and the Arts

Ever since the end of World War II successive governments in Canada have given increasing attention to the importance of culture and the arts in Canadian life and the need for government assistance in sustaining and developing them.

Creation of the Canada Council

The first real involvement of the government in the arts came in 1949 with the establishment of the Massey Commission. One of the principal recommendations of the Commission's report was that a government agency should be established to encourage artistic and cultural expression by Canadians. Parliament implemented this recommendation in 1957 when it created the Canada Council which since that time has been a major source of federal financial support to the arts community.

Self-portrait by Paraskeva Clark, a recent acquisition of the National Gallery of Canada.



The National Gallery of Canada

Centennial Year — 1967

In preparation for the year-long festivities, public funds were allocated for the construction throughout the country of cultural centres or buildings dedicated to the arts, and during the Centennial year substantial sums were spent sending performing arts companies on tour across the country. The term "cultural explosion" could aptly be applied to the burst of artistic creativity in Canada during 1967. The year's highlight, Expo '67, brought together creative and performing artists from all over the country. As a result of its extensive involvement in these activities, the federal government established a climate of co-operation between the public and private sector which represented a kind of cultural "take-off."

The Broadcasting Act

One of the government's initiatives was the approval by Parliament in 1968 of a new Broadcasting Act which set out a broadcasting policy for Canada, providing for a national broadcasting system that would be Canadian-owned and predominantly Canadian in program content. The Act called for the creation of an agency — the Canadian Radio Television Commission — to supervise and regulate national broadcasting. One of the first actions of the Commission was to introduce a regulation requiring 80 per cent Canadian ownership and complete control of radio and television stations, as well as of cable television systems under foreign control.

Canadian Film Development Corporation

Another important step taken by the government in 1968 was the establishment of the Canadian Film Development Corporation, an investment agency with a mandate to foster and promote the development of a feature film industry in Canada through government loans.

Development of a Cultural Policy

In October, 1968 the Secretary of State announced the government's intention of formulating a comprehensive cultural policy that would give effect to the principles of democratization and decentralization. Democratization would make it possible for all levels of society to enjoy and contribute to Canada's cultural wealth while decentralization would help to overcome the isolation from culture caused by vast distances and the uneven distribution of cultural facilities.

By this time the Department of the Secretary of State had become a focal point for the arts at the federal level, the Secretary of State being spokesman in Parliament and responsible in varying degrees for the Canadian Broadcasting Corporation (CBC), the National Film Board (NFB), the National Library and Public Archives, the Canada Council, the Canadian Radio Television Commission, the Canadian Film Development Corporation and the National Museums Corporation.

One of the first measures undertaken by the Secretary of State to realize the objectives of the policy was to set up machinery to provide for co-operation among the various levels of government (federal, provincial and municipal) and the arts community.

Multiculturalism Policy

Another measure that has influenced Canada's artistic and cultural development was the announcement by the Prime Minister in October, 1971 of a policy on multiculturalism. The new policy gave recognition for the first time to the valuable contribution made to Canada by its many and diverse cultural groups and promised support and encouragement to these groups in developing their heritage and sharing it with other Canadians.

Publishing Policy

In February 1972, the Secretary of State announced the first phase of a book publishing policy. Its principal aim is to promote the growth of a Canadian industry capable of publishing the works of all talented Canadian authors and of ensuring their widest possible distribution.

Under the policy, financial assistance in the form of increased grants was made available to publishers for the publication of Canadian works and additional funds were provided for the translation, purchase and export of Canadian books. The policy further provided that henceforth, wherever possible, the publication for commercial use of non-official publications sponsored by federal departments, organizations and Crown corporations would be entrusted to private publishers.

Museum Policy

In 1968, the three national museums and the National Gallery were incorporated under one administration known as the National Museums of Canada, with the object of increasing the capacity of both large and small museums throughout the country to serve a much greater public. The deliberations of museum directors from across the country early in 1971 led to the announcement in March 1972 of a new policy for museums with the National Museums of Canada responsible for its implementation.

The main features of the policy include the establishment of an "Associate Museum" network of some 20 or so museums (including the National Museums of Canada) in which activities, collections and standards of member museums are raised to the same professional level and within which exhibits may be exchanged. National Exhibition Centres are also to be set up in areas not served by museums, and a Museumobile Program established which would bring specially designed exhibits to areas where, because of inadequate facilities, collections are not exhibited.

Other features of the policy provide for an Emergency Purchase Fund to buy cultural objects; a Conservation Institute in Ottawa and five regional branches; a National Inventory; and the training of museum professionals.

Film Policy

In July 1972 the Secretary of State announced the first phase of a film policy designed to bring about better co-ordination of the film production and distribution activities of the federal cultural agencies and the private sector and to bring about a more rational development of the film industry in general.

Under the new policy, the statutory appropriation for the Canadian Film Development Corporation was doubled. An advisory board with representatives from the film industry and the cultural agencies was set up to advise the government on its participation in film matters. A Film Festival Bureau was created to handle and co-ordinate Canadian participation in film festivals at home and abroad. Arrangements were made with the CBC to show more Canadian films and the National Film Board was required to decentralize its production operations in order to offer greater encouragement to regional film-makers. Henceforth, the NFB would no longer be the exclusive agent for government sponsored films but would have to compete with the private sector for these contracts.

One of the first results to come out of the new policy was the signing in the summer of 1973 of an agreement with Odeon and Famous Players, two of the largest theatre chains in Canada, to increase the showing of Canadian films in their theatres.

Performing Arts Policy

In the summer of 1969 the National Arts Centre opened in Ottawa. Established to encourage the performing arts in the National Capital Region and to support the Canada Council in promoting the arts throughout the country, the Centre has been a success from its inception.

Early in 1972 as the first phase of a policy designed to provide further assistance to the performing arts in Canada, a national Touring Office was opened in Ottawa. The new organization, which is an arm of the Canada Council, is served by an advisory board of performing arts professionals from across the country. Its functions include the administration of touring grants to Canadian performing arts companies, the booking and co-ordination of tours and the provision of information and consultative services to the arts community in Canada. In addition to its domestic responsibilities, the Touring Office, in conjunction with the Department of External Affairs, arranges international tours for Canadian companies and artists and assists performing groups from other countries coming to Canada under cultural exchange arrangements.

The Governor General's Literary Awards for 1974

The six winning books of the Governor General's literary awards for 1974 were: *Fire on Stone* (McClelland & Stewart), a collection of poetry by Ralph Gustafson; *The Diviners* (McClelland & Stewart), a novel by Margaret Laurence; *The Siren Years* (Macmillan), a book of personal recollections by Charles Ritchie; *Don Quichotte de la démanche* (Éditions de l'Aurore), a novel by Victor-Lévy Beaulieu; *Mécanique jongleuse suivi de Masculin grammaticale* (Hexagone), a collection of poetry by Nicole Brossard; and *Habitants et marchands de Montréal au XVII^e siècle* (Plon), a historical study by Louise Dechêne.

The award-winning books were chosen by a committee of 18 members who examined over 450 books by Canadians published in 1974. Each of the winners also receives a cash prize of \$2,500 from the Canada Council.

National Museums of Canada

The National Museum of Canada originated in the Geological Survey of Canada which was founded in 1842 by Sir William Logan. Formerly the Victoria Memorial Museum, it was designated as the "National Museum of Canada" in 1927.

In 1957 the Museum was divided into two branches—the Human History Branch which carries out research and is responsible for exhibits in the field of archaeology, history, folklore and ethnology and the Natural History Branch, which has the same responsibilities in the fields of natural history. In 1966, a Science and Technology Branch was established, which conducts studies in the areas of physical sciences and technology with emphasis on items of national interest, including land transportation, agricultural technology, air transportation, chemistry, communications, energy, industry and mining.

In 1968 the three branches were brought under the administration of the new National Museums of Canada. A board of trustees, reporting to the Secretary of State, now administers all the National Museums of Canada—The National Gallery, the Museum of Man, the Museum of Natural Sciences and the Museum of Science and Technology.

Museum of Man, Ottawa, Ont.



The National Museum of Man

The National Museum of Man is concerned with the archaeology, ethnology, physical anthropology, ethnolinguistics, ethnohistory, folklore and history of Canada. These study collections, which are open to research by properly qualified students, include 687,954 archaeological specimens, 37,000 ethnological specimens, and 1,566 in physical anthropology. The Canadian Centre for Folk Culture Studies holdings represent over 50 ethno-cultural groups, aggregate 9,575 artifacts and 125 archival collections, the latter consisting of manuscripts, sound and videotapes, films, discs, wax cylinders, card catalogues, unpublished field reports, photographs and slides, clippings and information listings. The historical collections now being assembled total 30,000 specimens. Travelling exhibits have been organized on lighting devices and French-Canadian furniture.

The History Division is co-operating with the National Film Board in Canada's Visual History, a program for the production of slide sets in social and economic history, and in other projects and media presentations. Scientific and educational publications are available.

The Canadian War Museum, a component of the National Museum of Man, is concerned with research collections, exhibits and publications in Canadian military history.

The Communications Division of the National Museum of Man, began an extension program in 1970 to provide access to the Museum's collection across Canada and ensure museum service at the community level. In 1973-74 travelling exhibitions toured museums, libraries and shopping centres in 75 Canadian communities. This Division provides educational programs for the permanent exhibition halls, a wide range of school loans including sophisticated multi-media edukits, popular publications, educational fact sheets and public relations and information services for the National Museum of Man.

The National Museum of Natural Sciences

The Museum of Natural Sciences consists of seven divisions: Botany, Mineral Sciences, Palaeontology, Vertebrate Zoology, Invertebrate Zoology, the Canadian Oceanographic Identification Centre and Interpretation and Extension. Five exhibit halls on birds, mammals, dinosaurs, minerals and a special exhibit area were recently reopened in the Victoria Memorial Museum Building.

Large research collections are maintained by the Museum and these collections are opened to study by qualified students and others. The National Herbarium contains 378,000 sheets of vascular plants and 215,000 sheets of cryptogamic plants. The National Zoological collections include 159,000 lots (2,000,000 specimens) of molluscs, 50,000 lots (750,000 specimens) of crustaceans and other marine invertebrates, 215,000 fishes, 70,000 reptiles and amphibians, 63,000 birds and 43,000 mammals. The Palaeontological collections include about 16,000 fossil specimens and the National Collection of Display Minerals, about 17,000 specimens. During 1974, 86 research projects were undertaken and 75 manuscripts were prepared, many now in print.



Museum of Natural Sciences, Ottawa, Ont.

The National Museum of Science and Technology

The National Museum of Science and Technology, the newest of the four National Museums, opened in November 1967. This Museum challenges over three-quarters of a million visitors a year to climb, push, pull or just view its definitive collections. An additional quarter of a million annually visit the National Aeronautical Collection.

The exhibit pavilions contain working examples from the history of ground transportation such as sleighs, streetcars, steam locomotives and antique cars, to aviation — with Canada's first powered heavier-than-air flight. There are also "seeing puzzles", experiments and skill-trying tests in the physics hall. Other displays include transport, meteorology, astronomy, time pieces and a model workshop.

Housed at Rockcliffe Airport is the Museum's National Aeronautical Collection. Over 90 aircraft illustrate the progress of aviation from primitive to present times and the importance of the flying machine in the discovery and development of Canada. It is considered to be the third best aeronautical collection in the world. Included is one of the world's largest collections of aircraft engines.

Educational programs are developed and conducted by a staff of tour guides on general or topic-oriented subject matter for all age groups. During the summer months a steam train makes a return trip from Ottawa to Wakefield, Que., giving everyone a taste of a bygone era.

The newly opened observatory houses Canada's largest refracting telescope which is used for evening educational programs. Also available is resource material

from a 10,000 volume library which places special emphasis on a retrospective collection of Canadian aviation.

The Science Museum also participates in the creation of distinct exhibits, many of which are sent on tour throughout Canada. There are also exchanges of artifacts made with museums abroad.

The National Gallery of Canada

The beginnings of the National Gallery of Canada are associated with the founding of the Royal Canadian Academy of Arts in 1880. The Marquis of Lorne, then Governor General, had recommended and assisted in the founding of the Academy and among the tasks he assigned to that institution was the establishment of a National Gallery at the seat of government. Until 1907, the National Gallery was under the direct control of a Minister of the Crown, but in that year, in response to public demand, an Advisory Arts Council, consisting of three persons outside government, was appointed by the government to administer grants to the National Gallery. Three years later, the first professional curator was appointed.

In 1913, the National Gallery was incorporated by Act of Parliament and placed under the administration of a board of trustees appointed by the Governor General in Council; its function was to encourage public interest in the arts and to promote the interests of art throughout the country. Under this management, the Gallery increased its collections and developed into an art institution worthy of international recognition.

The Gallery's collections have been built up along international lines and give the people of Canada an indication of the origins of their traditions. The collection of Canadian art, the most extensive and important in existence, is continually being augmented. Over 60 per cent of all new acquisitions since 1966 have been Canadian. There are now more than 13,000 works of art in the collections. Included are many Old Masters, 12 having been acquired from the famous Liechtenstein collection. The Massey collection was presented to the Gallery during 1946-50 by the Massey Foundation. In 1973 an important gift of drawings was donated by Mrs. Samuel Bronfman of Montreal in honour of her late husband. There is a growing collection of contemporary art, prints and drawings and diploma works of the Royal Canadian Academy.

The services of the Gallery include the operation of a reference library open to the public, containing more than 45,000 volumes and periodicals on the history of art and other related subjects. An active program of exhibitions, lectures, films and guided tours is maintained for visitors to the Gallery in Ottawa.

The interests of the country as a whole are served by circulating exhibitions, lecture tours, publications, reproductions and films prepared by the National Gallery staff. The Gallery promotes interest in Canadian art abroad by participating in international exhibitions and by preparing major exhibitions of Canadian art for showing in other countries. It also brings important exhibitions from abroad to be shown in Canada.

An important decision for the National Gallery, in 1974, was the government's approval in principle of a new National Gallery building to be erected on Wellington Street between the National Library and the Supreme Court. One important



Autumn Foliage by Tom Thomson.

consequence of planning for the future was greater emphasis on promoting the understanding of works of art. Projects initiated toward this end included a monthly exhibition focusing on selected masterpieces, with explanatory slide projections and printed texts. The effort to reach a greater public was also shown in publication of five eight-page journals as substitutes for exhibition catalogues or to complement very expensive and scholarly ones.

Major exhibitions in Ottawa, from 1973-75, included The Bronfman Gift of Drawings; William de Kooning, Drawings and Sculptures; Moshe Safdie: For Everyone a Garden; Alberto Giacometti: A Retrospective; The Changing Image: Prints by Francisco Goya; and Canadian Painting in the Thirties. The Gallery's national program organized and circulated 23 exhibitions (including 11 new ones) throughout Canada and abroad to 63 bookings in 34 cities.

The major acquisition of the year was Bernini's Bust of Urban VIII. Purchase of a 17th century table ascribed to the Dutch artist Leonardo Van der Vinne represented a development of the Gallery's policy in the field of the decorative arts, and the National Gallery Association's donation of an American colonial kneehole desk dating from 1780-90 marked a new role for this non-profit volunteer group in supporting such a collection. The environmental sculpture Bedroom by contemporary American artist Claes Oldenburg was also among the acquisitions.

Libraries and Archives

Canadian libraries have undergone many changes since their 17th century beginning, when Marc Lescarbot shared his collection with his fellow adventurers in Acadia. The changes continue today, as libraries develop new programs to meet new needs.

The concept of the public library as a community resource centre has led to the library's greater involvement in providing information on community organization, services, facilities, etc. Along with this greater involvement has come a growing trend toward bringing the public library to those who cannot or do not come to it. Senior citizens, shut-ins, prisoners, as well as the physically and economically handicapped, use special materials, services and facilities provided by public libraries. In many cases, public libraries have been able to take advantage of the recent availability of federal government Local Initiative Project grants to finance these outreach programs.

Canadian citizens whose mother tongue is neither English nor French are also receiving more attention. Many libraries now provide foreign language materials for their users. At the national level, the newly formed Multilingual Biblioservice of the National Library has assembled collections of books in selected languages which it lends to provincial libraries for circulation throughout the provinces.

These services, as well as the traditional public library services, are supported by local and provincial funds, and most are offered in all provinces. The federal government funds library operations in the Yukon Territory and Northwest Territories. Each province has a public library agency or commission, and provincial legislation encourages co-operation on a larger scale. As a result, smaller centres are increasingly being served by regional systems, some of them sponsored by the central provincial agency. More sparsely populated and remote areas may still lack adequate library service, but great efforts are now being made to remedy the situation. Large urban centres have long been served by autonomous municipal libraries or library systems, but they too are becoming involved in larger regional or metropolitan systems.

The emphasis in school libraries has shifted from the use of printed materials alone to use of a wider range of information sources — films, recordings, tapes, slides, kits, etc. As a result, school libraries are becoming multi-media "resource centres."

College and university libraries have gone through a period of very rapid growth, but their expansion is now slowing down. These libraries have been very active in applying automated techniques to library procedures in order to enable them to handle their rapidly increasing work-load efficiently. In addition, they have sought a basis for rationalizing acquisitions policies and encouraging sharing of resources. To further this aim, the National Library has conducted or sponsored a number of surveys: of the resources that support graduate studies in the universities; of federal government libraries; and of inter-library loans in Canada. Together with studies carried out by the libraries themselves, they should provide a basis for the desired rationalization.



The John Robarts Research Library in Toronto, Ont.

Special libraries, i.e. libraries which serve a restricted clientele, now number more than 1,000. These include company and government libraries, and the libraries of associations and of institutions such as museums, hospitals and so on. Each province has a legislative library; these are among the larger libraries in the country. In Quebec there is also the *Bibliothèque nationale du Québec*. The largest federal government collections are those of the National Library, the Canada Institute for Scientific and Technical Information (CISTI), the Library of Parliament and the Department of Agriculture Library, all in Ottawa. Among the largest company and society libraries in Canada are those of the Sun Life Assurance Company and the Royal Bank of Canada, both in Montreal, and of the Law Society of Upper Canada, in Toronto.

CISTI, which incorporates the former National Science Library, specializes in science and technology. Among its services to the scientific research community is a computer-based Selective Dissemination of Information (SDI) service to researchers. The National Library offers a companion service for researchers in the social sciences and humanities.

The National Library of Canada specializes in the fields of Canadiana, the humanities and the social sciences. It administers the legal deposit regulations of the National Library Act (1969) and publishes the national bibliography *Canadiana*. It maintains national union catalogues through which it provides libraries and

researchers with the location of needed material. Recently it has undertaken to assign International Standard Book Numbers (ISBN) to books published in Canada.

Throughout the country, rapidly increasing costs have led to pressure on all types of libraries to share their resources and services. This, in turn, has led to increased interest in the possible advantages of co-operation through library networks. The National Library has taken the lead in plans for co-ordination on a national scale. In consultation with specialists from other libraries, it has been investigating the possibility of establishing a computer-based bibliographic information network in Canada. The production of the major sections of *Canadiana* has been automated, and work is going forward on a system which will allow Canadian libraries to benefit from this and other computerized data bases held at the National Library.

In Canada, library science training is given in the universities. Seven post-graduate schools offer master's degrees in library science. The Faculty of Library Science, University of Toronto and the School of Library and Information Science, University of Western Ontario, offer doctoral programs. In addition, post-secondary courses in community colleges for the training of library technicians are available in most parts of the country.

Archives

The increasing popular interest in history has had an important influence on archives in Canada. Numbers of users have increased and the nature of the clientele has changed. Academic historians now comprise less than 50 per cent of the users of archives. In the last five years the per capita expenditure on archives has doubled.

Expansion has been accompanied by significant developments in professional associations. Regional associations have been formed in the Atlantic, Toronto, Prairie and Pacific regions, the *Association des archivistes du Québec* has several hundred members and an independent Association of Canadian Archivists has replaced the former Archives Section of the Canadian Historical Association. Co-operation among archives and archivists is also promoted by such national projects as the Public Archives of Canada diffusion program, the Union List of Manuscripts in Canadian Repositories, a new computer-produced edition of which has been published recently and a union list of maps.

Records management continues to be a matter of major concern to national, provincial, city and university archives. In both records management and archives, considerable attention is given to such media as microforms and machine readable records. The Public Archives of Canada has established a National Film Archives and a Machine Readable Records Division.

International relations in the archives field are becoming more important. Canadians serve on the executive and committees of UNESCO, the International Council on Archives, international reprography associations, the Pan-American Institute of Geography and History and the Society of American Archivists. In 1974, Canada was host of the International Round Table on Archives and the Archives Section of the Pan-American Institute of Geography and History. Agreements for the exchange of archivists were reached with the USSR and Australia, and staff members of foreign archives come to Canada for training in archives administration, records management, micro-technology and conservation.

Science and Technology

With an estimated gross expenditure in 1970-71 of \$1,145 million on research and development (R&D), Canada lies sixth amongst the countries of the Organization for Economic Co-operation and Development (OECD) in expenditure on these activities. In terms of gross national product this expenditure represents 1.2 per cent, a figure exceeded by eight OECD countries.

The average annual rate of growth of expenditure on R&D which was 14.6 per cent in Canada from 1963 to 1967 was reduced to 4.5 per cent from 1967 to 1969 and to 1.4 per cent in 1969-71, the latest years for which figures are available. In common with the US and one or two other countries, Canada has seen a marked levelling-off in the support of science and technology since the period of rapid growth in the early 1960s.

About 53,000 scientific and technical personnel were employed in research and development in Canada in 1970-71. More than half of them were graduate scientists and engineers.

Science Policy

"A nation needs a comprehensive and consistent policy for the support and advancement of science, because there are more opportunities to advance science and technology than there are resources available to exploit them all. Government

Defence research scientists set up instrumentation on Robeson Channel pack ice to record the various factors that affect ice movement.



authorities who are subjected to continuing requests for support from industry, universities, scientific institutions, individual scientists, graduate students and international scientific organizations, as well as from consumers of science within various departments and agencies of government itself, need guidance on how to allocate their funds and their trained manpower. The purpose of a national policy for science is to provide such guidance." (OECD, 1963.)

This was probably the first coherent definition of science policy on the international scene. It was written by a group of advisers to OECD of which the late Dr. E.W.R. Steacie, then President of the National Research Council, was a member.

Now in 1976, science policy has additional dimensions. There is a greater realization of the social, economic, environmental and political effects of the application of science and technology. During wartime, science was used for military purposes quite deliberately and with great success. It is recognized that the time has come for the equally deliberate application to social and economic ends. While this recognition exists in many countries, Canada is singularly well-prepared for action. A period of intensive study in the latter half of the 1960s and the early 1970s has resulted in a great variety of useful reports principally sponsored by the Science Council of Canada and by the Senate Special Committee on Science and Technology. The latter in particular in its three-volume report (1971-73) advocated the substantial reorganization of government institutions to meet the challenges of the 1970s.

The Ministry of State for Science and Technology

The Ministry of State for Science and Technology, created in 1971, is the body that now develops the initiatives for change. One of its earliest policies was intended to redress the balance between research activities in government and those in industry. With a few exceptions, new research and development requirements of the government will be contracted out to industry instead of being undertaken in government laboratories. A recent extension of the policy will facilitate the government's response to unsolicited proposals for the support of specific R&D projects in industry, as well as in universities.

Efforts are being made to develop an improved ability to innovate in Canadian industry, including the service sector, with a view to increasing Canada's indigenous technological capability. At the same time the specific impediments to innovation are under study, some of which may be implicit in tariff and tax regulations, or in legislation relating to patents and restrictive trade practices. There is also interest in how industrial management decides to invest money in research and development.

The mechanism for the allocation of grants for university research is under review and there are major policy thrusts in several areas of national interest including the oceans, space, energy and communications.

There is now provision for the regular review and assessment of the scientific activities of government as a whole in relation to national objectives. To this end formal mechanisms have been established whereby the Ministry of State for Science and Technology advises the Treasury Board and the operating departments of the federal government on the budget for science and technology.

The Science Council of Canada

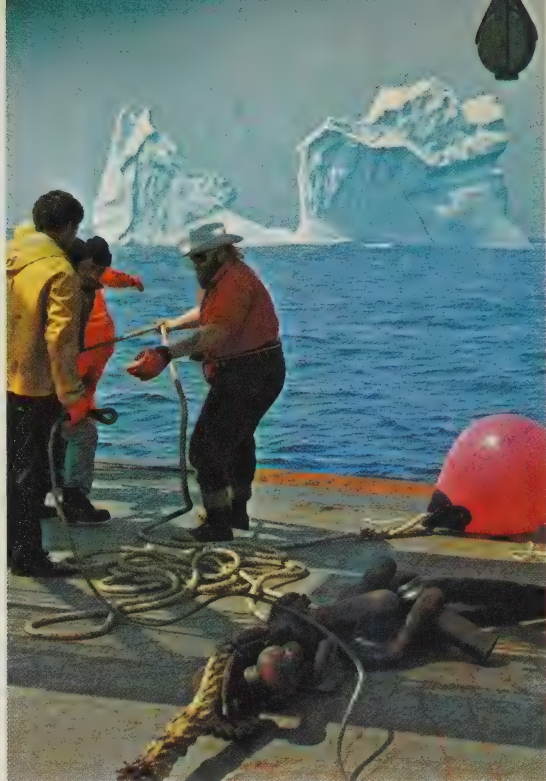
The Science Council, a quasi-independent body which advises the government on science policy by the publication of reports on subjects of current importance, published its ninth Annual Report in June 1975. During the year it published reports on *Science for Health Services* and on *Canada's Energy Opportunities*. It also published two background studies, the first dealing with the Ministry of State for Science and Technology, called *Knowledge, Power and Public Policy* and the second entitled *Technology Transfer in Construction*. Volume I of a new publication of the Science Council entitled *Issues in Canadian Science Policy* was also published.

Science and Technology in Government

Total expenditures on science and technology by the Canadian government were estimated to reach \$1,300 million in 1974, or 7 per cent of the total federal budget. This represents an increase of almost 12 per cent over the preceding year. The natural sciences receive 80 per cent of this amount; the human sciences 20 per cent. Some 64 per cent of the expenditure of \$1,300 million is devoted to R&D. The remainder covers other scientific activities such as seismic and magnetic surveys and the collection and dissemination of data and statistics.

Travelling by hovercraft, Environment Canada technicians conduct water sampling studies.





Icebergs are a major hazard in off-shore Newfoundland and Labrador exploration.

As it has in recent years, the National Research Council will spend more on R&D than any other federal department or agency. Its estimated expenditure of \$127 million represents 15 per cent of the government's R&D budget. Government spending on related scientific activities in 1974 was mainly attributable to the Department of the Environment and Statistics Canada which together are responsible for more than half the total expenditure in this category.

Government expenditures are generally classified under 11 headings: (1) General government services, (2) Foreign affairs, (3) Defence, (4) Transportation and communications, (5) Economic development and support, (6) Health and welfare, (7) Education assistance, (8) Culture and recreation, (9) Fiscal transfer payments, (10) Public debt and (11) Internal overhead expenses.

In 1973, government expenditures on scientific activities totalling \$1,160 million fell within nine of these headings. The greatest part of science expenditures was related to economic development and support, with transportation and communications and health and welfare close behind.¹

The National Research Council (NRC), a federal body, operates a central complex of laboratories in Ottawa and a network of laboratories across the nation pursuing basic and applied R&D in the natural sciences and engineering. Trisectoral collaboration, R&D efforts, and projects performed jointly by industry, university and government and the NRC's current priorities. NRC laboratories are active in the full

¹More detailed statistics are available in the book *Federal Scientific Resources* published by the Ministry of State for Science and Technology.

spectrum of the natural sciences. NRC is also a granting body providing funds to Canadian university scientists, doctoral and post-doctoral scholarships and fellowships to university students, and grants to industries through the Industrial Research Assistance Program (IRAP) to stimulate R&D in the industrial sector.

Science and Technology in Canadian Industry

A preliminary estimate would suggest that Canadian industry spent some \$470 million on R&D in 1973, of which about \$160 million was financed by the federal government in the form of grants or contracts.

The Department of Industry, Trade and Commerce, the National Research Council and some others provide financial assistance and scientific support to industrial research, usually on a cost-sharing basis. In spite of this assistance, for the sixth consecutive year, growth in industrial research and development has failed to keep up with the rising costs of performing it. While a few industries may have achieved real growth in R&D, many others have clearly declined as evidenced by reduced levels of staff or the actual closing of laboratories. The petrochemical industry has suffered badly in this respect. The decline in industrial R&D is particularly noticeable as it follows a period (1960-67) in which industrial expenditure on research and development increased almost four-fold from \$80 million to \$300 million. In the succeeding seven years it has increased by less than 60 per cent.

While the difficulty of accurately defining industrial R&D makes these figures at best approximate, they are sufficiently startling to have stimulated intensive analysis of the causes. One major problem is the size of the Canadian market, which does not provide sufficient promise of financial return from new undertakings. It is generally felt, in industrial circles, that Canadian industry must find a *modus vivendi* in a world in which more and more businesses are being organized from central points on a world scale.

University Research

Federal support of research in the natural sciences in Canadian universities was estimated at \$140 million in 1974—a 7 per cent increase over the preceding year. Most of this support came from the National Research Council, the Medical Research Council and the Canada Council for research in the human sciences. Government extramural support for the human sciences in 1974 was 26 per cent greater than in 1973, reflecting a policy to improve their position relative to the natural sciences and to ensure that all disciplines receive proper support.

Federal government support has traditionally been given to individual scientists on the basis of scientific excellence, rather than to institutions. Federal grants have not normally paid the salaries of scientists nor for much of the overhead cost. Consequently the provincial governments, in their financing of the universities, pay a very substantial but indefinable share of the costs of scientific research as well as the costs of teaching. Increasing efforts are being made to estimate this contribution but no figures are available.

Many aspects of the government support of university research are currently under review. Among these are: the balance between pure and applied research in the universities; the means of research support, whether by grant or contract; the

mechanisms of financial support, both federal and provincial; the extent of overhead payments; the uniformity of treatment of the universities by various federal and provincial departments and agencies; and, finally, the relationship of government expenditures on university research to various government objectives.

The Ministry of State for Science and Technology is also considering the advisability of identifying a certain number of full-time research institutes devoted to problems of national interest, with opportunities for industrial and federal and provincial government scientists to participate.

Science and Technology in International Affairs

Canada has agreements with several countries for co-operation in science and technology. These often provide for the exchange of scientists for limited periods, for co-operative scientific projects, and for the exchange of information. Even without formal agreements regular bilateral meetings may be held or scientific missions exchanged. An expanding network of science counsellors in Canadian embassies plays a key role in establishing and maintaining these relationships.

The Minister of State for Science and Technology has led scientific missions to China, the United Kingdom, Belgium and France. Such missions include scientists from federal and provincial governments, industry and universities. The missions are planned to ensure that all the interested parties in governments and in the private sector derive the maximum benefit from them.

Canada plays a significant role in the plenary committees on science and technology of the Organization for Economic Co-operation and Development (OECD), the North Atlantic Treaty Organization (NATO), the Economic Commission

An Agriculture Canada veterinarian extracts a blood sample to be tested for brucellosis, a contagious livestock disease.



of Europe (ECE), the United Nations and the Commonwealth. The NATO Science Committee met in Canada for the first time in its history in September 1974. The work of those international groups such as the Club of Rome, that endeavour to apply scientific techniques to the clarification of global problems, is also followed very closely. Canada has played a substantial role in the creation and support of the International Institute of Applied Systems Analysis in Vienna, which is devoted to the development and application of systems analysis and modelling.

Canadian scientists participate widely in international conferences on specialist scientific and technological subjects and Canada frequently hosts such meetings. For example the International Symposium on Subscriber Loops and Services held in Ottawa in May 1974 brought together the leading telecommunications experts from many countries.

Scientific Activities

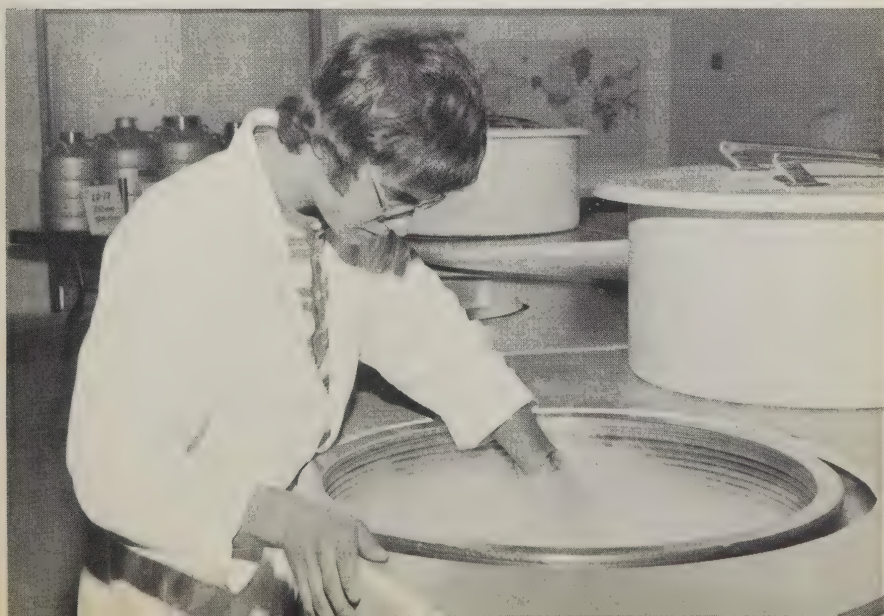
The following are some of the highlights of Canadian research, development, and other scientific activities in major areas of national interest.

Agricultural Research

Over 900 scientists at approximately 45 establishments across Canada are employed by the Canada Department of Agriculture.

Unique Canadian conditions demand that production research start at the plant or animal stage. The development of improved cultivars for particular soils and climatic conditions is essential to efficient production. Improved breeds of animals are similarly necessary. As a result of this approach to research, a large number of

Semen from A-1 bulls is stored in nitrogen tanks in progeny testing by Agriculture Canada.



new or improved varieties of plants, breeds of animals and food products have been introduced including several new varieties of brome grass, timothy, alfalfa and clover; new cultivars of rapeseed with very low erucic acid and improved oil and protein content, and other oilseed crops such as flax; new varieties of apples, the first hardy dwarfing apple rootstock, and high quality peaches and sweet cherries; new cultivars of small fruits such as raspberries and strawberries; new varieties of vegetables including a seedless cucumber for greenhouse production and new potato varieties. A number of new cereals have been introduced including a feed barley and a malting barley, several varieties of oats and new varieties of wheat, more resistant to disease, and having improved quality to maintain Canada's worldwide reputation. Other contributions include a number of inbred lines of grain corn for production of special hybrids; new varieties of soya beans; the first hybrid sunflowers; new field beans and peas; and a buckwheat variety of special interest to Japan.

After successful full-scale field trials, the first commercial attempt to eradicate the codling moth by the sterility method is being undertaken in the 2,000 acres of apple and pear orchards of the relatively isolated Similkameen Valley of British Columbia. Some 15 million codling moths will be reared, made sterile by irradiation and released in the orchards in 1976.

Research efforts to develop new livestock breeds is making steady advances. Perhaps the most spectacular in recent years has been the use of exotic strains of beef cattle imported from a number of countries. The hybrids and further backcrosses achieved through the use of these animals have made a significant breakthrough in the beef cattle industry of North America. Continued progress has been achieved in the improvement of dairy cattle through the National Dairy Cattle Breeding Program, and research on poultry genetics, husbandry, nutrition and physiology has led to improved egg production and broiler quality.

As the result of intensive studies on the pests and diseases of plants and animals, a variety of approaches has been developed to protect crops and livestock while minimizing the use of pesticides and fungicides. Major efforts are directed at developing plant varieties resistant to insect and disease attack, and using integrated control programs — biological factors integrated with precise chemical agents. Emphasis is being placed on determining the effect of pesticides on the environment and on development of chemicals and procedures to minimize toxic effects.

In the area of food processing, research has contributed several improved products including fruit, meat, milk and cereal products.

At the eight laboratories of the Animal Pathology Division of the Health of Animals Branch, research workers are developing diagnostic methods to help control animal diseases caused by bacteria and viruses. At the Sackville, NB, laboratory, internal parasites of livestock are being studied to reduce the impairment of productivity which results from parasitism. Research work at the Animal Diseases Research Institute, Ottawa, has facilitated the production of a commercial vaccine against Marek's disease, an economically serious disease of poultry. At the same institute, investigations are being made on blood typing in cattle and on abnormal changes in chromosomes. Work is continuing on transplanting fertilized ova from cows of the highest quality to cows of an inferior genetic status to increase

availability of high-grade calves; similar experiments are being made in swine. The project was undertaken to study the possibility of disease transmission if ovum transplantation becomes accepted as a means of increasing the introduction of exotic breeds of livestock.

Atmospheric Environment Research

The effects of freons, supersonic transport exhausts and other compounds on the stratosphere, particularly the ozone layer, and the potentially harmful results at the earth's surface affecting man have become matters of great concern in recent years and the subject of research investigations by the Atmospheric Environment Service. Measurements of the important stratospheric constituents are being made to establish the current, unperturbed, stratospheric photochemical balance and to verify photochemical reaction rates in order to serve as inputs to models of stratospheric behaviour. These models will then be used to estimate the effects of stratospheric pollution.

Climatic trends are also a question of grave concern with respect to agricultural production and other long-term effects on mankind. These trends are being delineated, measured and analyzed in order to arrive at a basis for a physical understanding of the processes and for the possibilities of long-range prediction.

A comprehensive environmental prediction system to support oil drilling in the Beaufort Sea is being developed and will include prediction of ice masses and ice floes, weather elements and sea-state.

Environmental impact studies for existing and proposed industrial sites are being conducted in order to determine the effects of pollutant emissions on air quality and to determine the necessary changes to make the outputs acceptable.

Effects of an under-ice oil spill are studied at Balaena Bay, NWT.



Fisheries and Aquatic Research

As a leading maritime nation, Canada conducts an extensive range of scientific programs aimed at probing the secrets of the seas and their vast and valuable resources. Responsibility for Canadian fisheries, oceanographic and hydrographic research is entrusted to the Fisheries and Marine Service of Environment Canada.

Programs of fisheries research directly supporting national and international fisheries activities are conducted from Fisheries and Marine Service research stations located in coastal and inland areas across Canada. These programs are designed to add to fundamental knowledge of Canada's vast living marine and freshwater resources. Included are life history, population and behaviour studies leading to a sound scientific basis for the conservation and management of the commercially important fisheries including those for lobster, crab, shrimp, oyster, scallops, clams, marine mammals, salmon, cod, herring and halibut, as well as some marine plants such as phytoplankton and seaweeds. Also included are studies on fish and shellfish diseases and fish predators; research on fish genetics, physiology and behaviour, the latter with a view to improving fish culture and farming methods and improving fish farm and hatchery stocks. In addition to these basic studies, new fishing grounds and new species for exploitation are sought and experiments in improving fishing methods are undertaken.

The aquatic environment program takes in studies of the marine and freshwater environments of aquatic organisms in order to learn more about primary and secondary productivity and the occurrence of ocean and freshwater life of importance to man. Considerable importance is placed on increased research efforts associated with the prediction, abatement and elimination of pollution, including the effects of freshwater and marine eutrophication. Investigations are conducted

Tagging salmon at the Adams River near Salmon Arm, BC.



also into the distribution and physical and chemical characteristics of major ocean currents and the physical and biological structures of large ocean areas, including the ocean bottom, where concentrations of fish and other aquatic life occur. Ocean climate and ocean weather as they affect the distribution of fish and other living organisms, as well as the vertical and horizontal distribution of nutrient matter and the cycle of energy and life in the seas, are regularly observed and correlated.

Environmental Protection Service Research

The Wastewater Technology Centre in Burlington, Ont., is carrying on many wastewater research programs. Recent examples include a pilot-scale two-stage activated sludge system for treating kraft bleachery effluent; detailed studies of various flow and process configurations for biological nitrification; and studies of mine and mill wastewater treatment technology in the base metal mining industry. A study concerning recycling of liquid sewage sludge on dredged river sand in British Columbia has been completed.

Liquids from the processing area of the paper company at Baie Comeau, Que. are circulated through the clarifier tank where impurities are removed by flotation.



Three programs concerning sewage treatment plants serving small communities have been started: the development and demonstration of physical-chemical treatment; how the efficiency of the primary treatment process is affected by adding chemicals to raw sewage; and biological treatment.

Oil is a valuable but non-renewable resource. The Service is searching for uses for waste lubricating oil. A survey has been completed on over-all volumes, chemical compositions, current end-uses, disposal methods and existing legislation impinging on this area. A follow-up study is being made on the problems of collection, treatment, recycling and disposal of waste lubricating oil.

The Environmental Emergency Branch is studying cold-weather environmental problems, such as drilling blowouts in the Arctic; winter pipeline spills; dyking of storage facilities in the North; and spills in ice-infested water.

The Branch is also involved in technology development work for controlling and cleaning up accidental pollution. The Branch tests, evaluates and develops oil spill countermeasures equipment, materials and techniques. The program for testing equipment includes the use of skimmers, booms, pumps and remote sensing systems. Work is also under way on various oil spill treatment agents such as absorbents, biodegraders, combustion agents and chemical treatments. In addition, this group analyzes countermeasure requirements for specific high risk and sensitive areas.

An effective method of treating Dutch elm disease is cutting the root and feeding a phosphate solution into it through a rubber tube.





Remote sensing image of Vancouver Island, BC.

Environmental Management Service Research

The bulk of forestry research in Canada is conducted by the federal and provincial governments, certain universities, forest industry companies and some provincial research councils. The chief federal agency involved is the Canadian Forestry Service of Environment Canada. Most provincial government research is being carried out in the provinces of British Columbia, Ontario and Quebec, while work at the universities is confined largely to the forestry schools attached to the Universities of British Columbia, Toronto, Laval and New Brunswick. Within industry, there is a substantial commitment to forest products research, and most pulp and paper companies undertake research relative to their own particular products. Of Canada's eight provincial research councils or foundations, those located in British Columbia and Ontario have been most involved in forestry research. A recent highlight in forest research has been the establishment of the Forest Engineering Research Institute of Canada — *Institut canadien de recherches en génie forestier* with headquarters at Pointe Claire, Que. This is jointly funded by the federal government and industry. Earth Resources Technology Satellite imagery is now proving to be useful in mapping forests for fuel potential, as well as for identifying areas susceptible to spruce budworm. Promising work is proceeding on aerial spraying of spruce budworm moth flights located by radar. This may lead to a dramatic shift away from control methods directed at the larvae. In the fight against Dutch elm disease, research is now concentrating on reducing the costs and complexity of the chemical root-injection method to the point where the average home owner may be able to look after his own trees.

Environment Canada researchers at the Canada Centre for Inland Waters (CCIW) have developed a process to remove 99.8 per cent of asbestos fibres from drinking

water supplies. The process is being tested in a pilot plant as a joint project with the Ontario Ministry of the Environment. A reverse osmosis process using cellulose acetate membrane to remove heavy metals from secondary sewage has been refined at CCIW to remove 100 per cent of iron and aluminum, 95 per cent of cadmium, chromium and copper and 85 per cent of lead, magnesium and zinc.

A two-year study conducted by CCIW indicates ice piling is due to changes in wind direction rather than wind velocity or water currents. Off-shore structures are recommended to reduce damage to shore property.

Environment Canada and US officials co-operated in a joint aerial survey to measure the spring flooding potential of prairie snow melt. Snow pack depth and run-off potential were measured by recording gamma radiation from the snow-covered earth.

Hydrogeologists in Environment Canada have evaluated the suitability of Canadian geological regions as sites for the sub-surface disposal of liquid wastes. Sites were evaluated on the basis of geology, hydrodynamics, hydrochemistry, economic resources and man-made hazards. Further detailed investigations were recommended for each proposed site. Satellite re-transmission of water-quantity data from remote, inaccessible monitoring sites on a real-time basis has proven to be reliable and inexpensive. The number of automatic data collection platforms has been increased from nine to 30 for further experimentation, which will include the use of solar energy to recharge power sources for the platforms.

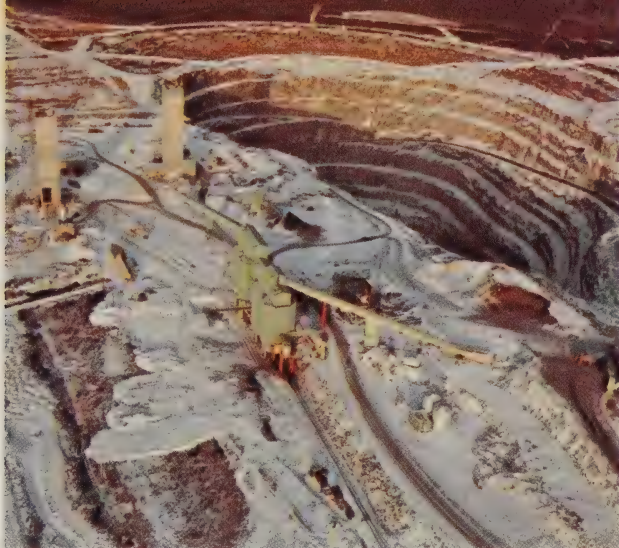
Mining and Metallurgical Research

The Mining Research Centre at the Department of Energy, Mines and Resources has undertaken a \$4 million, five-year program to improve the stability of open-pit slopes. The objective of this project is to reduce the cost of producing minerals from open pits by synthesizing research data into engineering systems for the design and support of the sloping walls. This could reduce the excavation of mine waste which is the largest cost element in open-pit mining. The successful completion of this project could save the mining industry \$50 million annually.

A major area of R&D is the mining of coal in the mountainous areas of western Canada. The severely folded and faulted coal seams restrict the use of conventional coal-mining techniques and create difficult ground support problems. Spontaneous combustion in coal exposed to the atmosphere is complicating both cost recovery and the mine working environment. R&D is being undertaken by government and industry to resolve these problems.

By far the largest and most comprehensive R&D is taking place with respect to the oil sands of the Athabasca region of western Canada. These low-grade deposits of petroleum present a multitude of problems, from their removal from the ground, separation of the oil from the sand, to the use of the product. One company alone has a program that will cost \$1,000 million. The NRC's Division of Chemistry has developed a process of spherical agglomeration for recovering oil from tar sands such as the Athabasca's.

The same Fuels Research Centre has developed a blue-flame domestic oil burner which is expected to save up to 10 per cent in fuel consumption and is non-polluting. This burner is undergoing extensive trials and should be available commercially in the near future.



Potash mines near Saskatoon, Sask.

The production of steel is vital to the development of all sectors of the Canadian economy, including energy. There are three separate R&D projects that are attempting to circumvent the need for the blast furnace and dependence on coking coal. One steel company has developed the SL/RN rotary kiln process for the direct reduction of iron ore. Another is operating a pilot plant at Niagara Falls, Ont., on a rotary kiln process, also for direct reduction of iron ore. The Metals Reduction and Energy Centre of the Department of Energy, Mines and Resources (EMR) has successfully demonstrated a process called the Shaft Electric Reduction Furnace (SERF), which utilizes the waste gases from an electric reduction furnace to preheat and pre-reduce iron ore.

Two mineral processing companies have co-operated on a multi-million dollar, multi-year project to develop a hydro-metallurgical method for the commercial production of copper. This technique would avoid the atmospheric pollution which typifies copper smelters, and be environmentally acceptable. Moreover, the process would recover sulphur, rather than having it emitted to the environment. The successful commercialization of this process would give Canada a strong position in copper production in an era when environmental concerns are forcing restrictions on the traditional smelters.

Fuels

The refining of Canada's low-grade crude oils and bitumen sands is complicated by the presence of organically-combined traces of nickel and vanadium, and 5 per cent sulphur, which must be removed. The Mines Branch has developed a high pressure hydro-cracking process that eliminates much of the nickel and vanadium and produces a low viscosity product that would make a suitable feedstock for refineries.

Research on the chemical composition of Athabasca bitumen has resulted in the development of improved analytical techniques that have proved their value in

detecting oil spills, and "fingerprinting" crude oils. This capability has revealed differences in Canadian cretaceous oils of the tar belt. The extent of thermal maturation of the crude oil determines the possibility of its extraction from the terrain. This promises to be a useful tool for oil exploration in the Arctic and off-shore on the East Coast.

Energy Research

Current expenditures on energy research and development by the federal government are distributed approximately as follows: nuclear energy, 75 per cent; coal, 3 per cent; oil and gas (including tar sands), 17 per cent; hydro-electric power, 2 per cent; and on other (including renewable resources), 3 per cent.

Most of the R&D on nuclear energy is conducted by the Crown agency, Atomic Energy of Canada Ltd. (AECL), although this agency also funds considerable amounts of the R&D in industries and universities. AECL's current major thrust is in support of its CANDU (Canada Deuterium Uranium) nuclear power reactor system and associated heavy water plants. Successful operation of the Pickering generating station, and of both the Port Hawkesbury and the Bruce heavy water plants has convincingly demonstrated the commercial viability of the CANDU system. Much of AECL's R&D in improved equipment, components and materials for CANDU reactors is done in collaboration with Canadian industry.

The success of the Canadian reactor system has no doubt had some influence on the recent British decision to choose a similar type of reactor for its new power program. The British authorities have already declared their intention of seeking substantial co-operation with Canada during the development of that project.

Private industry and the utilities play a major role in R&D on oil, gas and hydropower (notably in pipeline transportation, thermal electric conversion, hydropower development and electrical-industrial equipment), which compensates for lesser federal funding in these areas.

Several provincial governments support research councils or foundations that are involved to some degree in energy R&D activities. The largest performer is the Alberta Research Council, with an energy R&D budget of \$500,000 in 1972. Alberta has announced a five-year, \$100 million research program on *in situ* production of deep oil sands. Most of the other energy R&D in Alberta is concentrated on conventional oil, gas and coal research.

Within the federal government, the Department of Energy, Mines and Resources is concerned with the determination of reserves of oil and gas, mainly in the frontier areas. The Department of Industry, Trade and Commerce (ITC) is playing an important role funding R&D in the development, production and processing of energy resources and it is by far the predominant department in transportation and storage R&D, mainly for oil and gas.

ITC and the NRC are major contributors to transmission R&D. The Department of the Environment is predominant in environmental management (especially of oil and gas pipelines).

Through grants administered by the Atomic Energy Control Board, the federal government supports Canadian universities in fundamental research associated with nuclear energy. A good example of this support is the TRIUMF accelerator

facility in Vancouver, which began to operate in 1974. The TRIUMF cyclotron will be a versatile and powerful tool for basic research in nuclear physics and chemistry. It will be used by the universities of Alberta, Simon Fraser, Victoria and British Columbia.

Oceans

The world ocean, covering more than three quarters of the planet's surface, is the original repository of life and now a vital component of the life support system of the planet's biosphere. The sea produces much of the oxygen in the atmosphere and controls the weather for thousands of miles inland.

Submarine Canada is one third as large as the Canadian land mass: more than 1 million square miles. The Canadian continental shelf, to a depth of 656 feet, is as large as the Indian subcontinent. In addition, it extends into three separate oceans, along nearly 60,000 miles of island and mainland coastline.

The ocean beds hold non-renewable resources of oil, gas and metals. Oil and gas exploration in the Arctic and off the Atlantic Provinces has not yet yielded deposits worth immediate exploitation but the discovery rate matches the early development of the North Sea oil and gas fields. Seabed mining is a new technology and industry which will affect Canada's export markets for minerals.

Renewable resources in the form of marine life were worth nearly \$500 million to coastal fish-packing plants in 1972 and supported, at least seasonally, 60,000 fishermen and 18,500 plant workers. About 95 per cent of Canadian fish catches are from coastal waters. Other countries take even more from deepwater Canadian fisheries off the Grand Banks and the Pacific Coast.

Water is still the cheapest form of transport. At Canada's 250 ports for which statistics are available, there were more than 176,000 vessel arrivals and departures



In off-shore drilling operations, the "riser", through which the drill pipe passes, is the vital connection between the drilling unit and the seabed.

in 1972. Shipping moved 177,500 million tons of international trade in and out of Canadian ports in 1972 and 126 million tons were handled between Canadian ports. Canada is pioneering deepwater ports for supertankers, although it is also concerned about navigation, especially by oil carriers, in the Arctic and along the Pacific Coast.

Communications and Space Research

Total government expenditure on space research in 1974 has been estimated at \$35 million. The Department of Communications spends some two thirds of this amount on its satellite program. The Department of Energy, Mines and Resources spends about one sixth in its remote-sensing centre and the National Research Council is the other significant spender; its activities include the operation of the Churchill Rocket Range.

Telesat Canada was set up in 1969 to establish and operate a domestic satellite communications system. While the ANIK satellites were developed in the US to Canadian specifications, many of the components were developed and produced by Canadian industries.

The system was inaugurated in January 1973 by a telephone call from Ottawa to Resolute Bay via ANIK I. By the end of that year a second satellite, ANIK II, was also in orbit and a third was launched in 1975. The three satellites are performing satisfactorily exhibiting only slight anomalies which are not expected to have any major effect on their longevity or usefulness. These satellites have an estimated useful life of six years.

The Communications Research Centre (CRC) of the Department of Communications is developing an experimental communications satellite which may point the way to the design of later operational satellites. Tests are nearing completion for this Communications Technology Satellite due to be launched in December 1975.

The Trans-Canada Telephone System and CN/CP Telecommunications have installed new computer-communications networks to meet the fast-growing demand for this type of service.

Scientific Satellites

With the launching of Alouette I in 1962, Canada became a pioneer in the use of satellites in scientific research. This "topside sounder" satellite and its successors Alouette II and ISIS-I and II, contain experiments designed to study the properties of the upper atmosphere and of electronic devices such as antennas in that environment. No new scientific satellites were launched in the past year but ISIS-I and ISIS-II are both in good health and are providing extensive scientific data to scientists from the eight countries that are participating in the analysis of the data. On June 3, 1973, the Alouette II satellite was placed in a standby "mothball" state after 7½ years of extensive and valuable data-acquisition.

The optical experiments incorporated in ISIS-II have provided some of the first views of the polar aurora from space. The synoptic capability of these instruments enables them to provide information on the airglow and aurora that are virtually unattainable from ground observations. In addition, since this satellite can observe

the aurora and the magnetospheric energetic particles that give rise to it, much new information is emerging on auroral processes.

Another feature of ISIS-II is its ability to measure at very low frequencies the impedance of the sounding antenna. In a plasma such as the ionosphere the behaviour of antennas is very different from that in free space. The study of the data obtained from this experiment has provided valuable new information on the performance of an antenna mounted on a spacecraft.

Rocket Experiments. While the rocket range of the NRC at Churchill, Man. has seen reduced activity in recent years, 14 of the 16 Canadian-built rocket payloads launched in 1973 used the Churchill Research Range. One was launched from Kauai in Hawaii and one from Gillam, Man. Low energy X-ray astronomy was the objective of the Kauai launch, and this required a launch site at low geomagnetic latitudes to avoid adverse effects from the energetic particles found at higher latitudes. The launch from the Gillam site was co-ordinated with two launches from the Churchill Range. The rockets provided very useful information on the spatial variation and motion of the aurora, and the particles and processes that give rise to it. Five small rockets were launched during a 24-hour period from the Churchill Range to probe the characteristics of atomic oxygen in the upper atmosphere. These experiments provided new information on the processes that lead to auroral luminosity.

Remote Sensing. The Canada Centre for Remote Sensing, a part of the Department of Energy, Mines and Resources, is now in full operation. It collects, processes and disseminates data derived from airborne and satellite-borne sensors for their application to resource management and environmental control of Canadian land and waters. The Centre operates four aircraft with an array of photographic and other sensors to collect airborne remote sensing data on behalf of investigators all across Canada. The data are applied to a wide variety of disciplines including agriculture, forestry, geology, oceanography, glaciology and ice reconnaissance.

A receiving station in Prince Albert, Sask., has been converted for use as a tracking station for the American Earth Resources Technology Satellite (ERTS I). The data received are processed into image form at a special facility in Ottawa. These images are distributed throughout Canada by the National Air Photo Library.

Medical and Health Research

With the completion of the Nutrition Canada Survey and the release of the Minister's position statement on a health perspective for Canadians, it is apparent that a change in emphasis has occurred. This change places more emphasis on prevention of disease, disability and death as opposed to treatment in institutions. With the increased interest in prevention, the government has realized the need to change eating habits, food-purchasing patterns and a range of other lifestyles that involve recreation, exercise and a reduction in self-destructive practices such as smoking and the abusive intake of alcoholic beverages.

Research in the Health Programs Branch of the Department of National Health and Welfare has seen the development of a preparation for the slow release into the body of the anti-tuberculosis drug isoniazid, permitting larger doses to be given to Inuit among whom the risk of tuberculosis is greater. There has been substantial

progress in field trials of rubella vaccines and increased activity in the study of rehabilitation problems at both the mental and physical level.

Attempts to identify and encourage research in the epidemiology of all forms of cancer have been increased in co-operation with the National Cancer Research Institute. A cancer research co-ordinating committee has been set up to increase and make more visible the collaboration which exists between the Medical Research Council, the Department of National Health and Welfare, the Ontario Cancer Treatment and Research Foundation, and the National Cancer Institute of Canada. The current activities of the Committee include collaborative nation-wide trials of BCG immunotherapy for the treatment of certain types of cancer.

Several recent developments have occurred in the field of biomedical engineering, which is relatively new to Canada. These developments include reading machines for the blind, improved limb prostheses, an analyser for the detection of trace atmospheric gases and a new type of artificial kidney device.

A party of doctors and experienced mountain climbers approach the world's highest research laboratories on Mount Logan, Yukon Territory, 17,400 feet above sea level where studies are conducted to determine how man is affected by high altitudes.





Versadome hut at the high altitude research station.



Camp at about 14,000 feet on Mount Logan.

Northern Research

The Canadian north has long been recognized as an area for research of unusual scientific interest and also of particular importance to Canada. The Department of Indian Affairs and Northern Development has therefore designed certain long-term measures to give special encouragement to northern research. The training of graduate students is assisted by special grants administered by the Department which also operates a general purpose laboratory in Inuvik in the Mackenzie Delta to accommodate scientists from government, universities and industry. A second laboratory is nearing completion at Igloolik in the eastern Arctic, and plans are being made for a third laboratory at Whitehorse in the Yukon Territory. These measures do not however meet the need for research to support major projects, and in particular to obtain the specific detailed information required to assist and control the development of non-renewable resources and the construction of major transportation facilities. For these purposes substantial short-term programs of applied problem-oriented research have been organized, such as the Environmental/Social Program for the Mackenzie Highway and Northern Pipelines. New policy thrusts in this important area can be expected in the years to come.

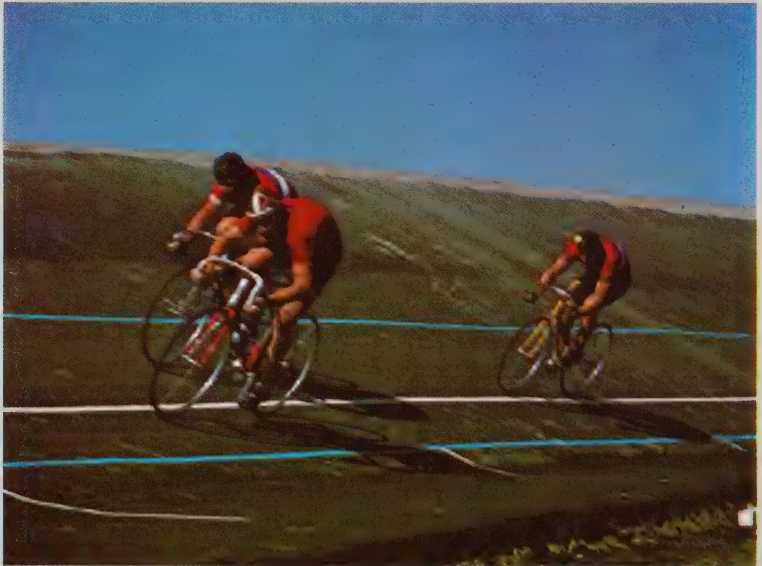
Leisure

Industrialization and technological progress in Canada have led to high rates of productivity. This in turn has resulted in shorter work weeks, longer paid vacations, earlier retirement, and hence more time for leisure and recreation.

Definitions of leisure are numerous and reflect a variety of views. Leisure can be simply defined as those groups of activities undertaken in "non-work" time. Leisure has also been described as that group of activities in which a person may indulge of his own free will: to rest, to amuse himself, to add to his knowledge or skills, to enhance his personal, physical and mental health through sports and cultural activities, or to carry out unpaid community work. However, many definitions of leisure exclude activities such as sleeping, eating, commuting to and from work, household duties and personal care. Formal programs of continuing education may be regarded as personal improvement or maintenance, just as much as sleeping or eating and therefore may also be excluded from leisure activity. On the other hand, it can be argued that the allocation of all non-work time is at the discretion of the individual and therefore any part of it is potentially time available for leisure. Nevertheless most people would agree there is a basic minimum time required for sleeping, eating and personal care that cannot in any sense be regarded as available for leisure activities.

Despite the fact that there is no precise agreement on what constitutes leisure, there is agreement on a core of activities. These are activities that offer recreation or give pleasure to the participants. Examples would be playing tennis or taking a

Canadian National bicycling championship held in 1975 on Calgary's newly built racing track.





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1. Harness racing in Prince Edward Island.
2. Hockey is a favourite winter sport.
3. A lacrosse game in Chicoutimi, Que.
4. Racing near Brookvale, PEI.



4

walk in the park. There are instances of activities that may be regarded as undesired household tasks in some circumstances, yet pleasurable recreational activities in others. Such tasks might include mowing the lawn, cooking, dressmaking or house painting. Thus recreation and leisure may be regarded as qualitative terms which are valued differently according to personal tastes and inclinations. These may vary not only between persons but in different circumstances for the same person.

There is a reciprocal relationship between work and leisure. Longer working hours mean less time for leisure. While additional work time normally provides additional income, additional leisure time typically leads to increased expenditures. The distribution of time between work and leisure is theoretically a matter of choice. But in practice most employed persons as individuals have only limited freedom in determining how long they work. This is because working hours and holidays in Canada are normally fixed, either by employers or as a result of collective bargaining, according to current legislation and accepted norms. As a result, Canadian workers are typically committed to working a fixed number of hours a day and days a week.

The normal work week in Canada is from 35 to 40 hours spread over five working days. Most employees receive at least 10 paid holidays annually and a two-week annual vacation, which is usually extended to three, four or more weeks after several years of service with the same employer. Allowing for weekends, paid holidays and annual vacations with pay, most employed persons in Canada have at least 124 days free from work each year. The net amount of non-work time available to Canadians depends also on the proportion of the population in the labour force and whether or not they are employed or seeking employment. Those outside the labour force are by definition non-working and therefore have more free time at their disposal. Typical of these are persons who have retired early or are elderly.

Events and Attractions

Every year, in all parts of Canada, events and attractions draw large numbers of vacationers and travellers seeking diversion, excitement and relaxation. Events such as the Quebec Winter Carnival and the Calgary Stampede are organized to promote or celebrate historical, social or cultural occasions. On the other hand, attractions can be either natural or man-made physical features of a permanent nature which provide facilities for displaying distinctive architectural or geographic qualities or recreational or cultural activities. In this category are museums, parks, mountains and city nightlife. Specific examples would be a natural phenomenon like the tidal bore on the Petitcodiac River at Moncton, NB or a man-made attraction such as Lower Fort Garry in Selkirk, Man.

Outstanding events take place in each province and territory. One of the oldest sporting events in North America is Newfoundland's annual regatta, held in St. John's. Prince Edward Island's capital city, Charlottetown, features Country Days and Old Home Week with musical entertainment, agricultural and handicraft displays, harness racing and parades. Nova Scotia events include Highland Games in the centres of Cape Breton, while in New Brunswick there are a variety of festivities related to the province's fishing resources such as the Shediac Lobster Festival and the Campbellton Salmon Festival.

In Quebec attractions include Man and his World, Montreal's permanent cultural and ethnic exhibition, and the Sherbrooke Festival de Cantons which features

"Québécois" shows, horse-pulling, soirées and gourmet cuisine. Drama festivals in Stratford and Niagara-on-the-Lake and Festival Canada, a program of cultural events held in Ottawa, are examples of happenings in Ontario.

Western Canada's events reflect its cultural diversity and pioneering heritage. A national Ukrainian festival is held in Dauphin, Man. and a Bavarian Festival in Kimberley, BC. Pioneer Days are celebrated in Saskatoon, Sask. and Banff, Alta., has its Indian Days.

In the Territories special events are held each summer. In Yellowknife, NWT, a Midnight Golf Tournament is held each year, late in June. In Dawson City, Yukon Territory, the discovery of gold in 1896 is celebrated on Discovery Day in August by raft races on the Klondike River, dances, sports and entertainment relating to the period.

Recreation

The types of leisure activities undertaken vary widely according to the age, sex, income and occupation of the individual. A survey by Statistics Canada in 1972 of leisure time activities showed that in a series of selected physical recreational activities, walking was the most popular of all, followed by swimming, hunting and fishing. In recent years bicycling has become increasingly popular with adults and families in many parts of Canada. In 1972, close to 12 per cent of the adult population indicated that they went bicycling regularly.

Every year more Canadians discover the pleasures of winter sports. Survey results have shown that in the winter months, the sports that have the most participants are indoor skating, snowmobiling, and both downhill and cross-country skiing. The recent growth of trail and cross-country skiing in the winter has to some degree paralleled the growth of bicycling in the summer months. Non-professional hockey is a traditionally popular Canadian sport in which many young



Midsummer skiing at 9,000 feet, above Lake Louise, Alta.

people take part regularly. Curling is also a favourite indoor winter sport in most parts of Canada. Other common leisure-time activities of Canadians include home handicrafts, bowling and attendance at movies, sports events, musical performances, exhibitions, fairs and the theatre.

All levels of government play an active role in enriching the leisure time of Canadians. Several federal agencies have major programs related to leisure. Among these is the Fitness and Amateur Sports Branch of the Department of National Health and Welfare. It is mainly responsible for outdoor recreation and physical fitness programs and carries out a number of programs aimed at encouraging citizens of all ages to take part in physical fitness activities. It provides financial and consultative assistance to recreational agencies such as the YMCA, boys' clubs, Scouts, Guides and youth hostels. It also assists Canada's native people in increasing their participation in sports and recreation.

The responsibilities of the Department of the Environment include various facets of recreation including sports fishing, the conservation of migratory game birds, the provision of interpretative centres on wildlife and the construction and maintenance of wharf facilities for small recreational crafts.

The support of tourism is the responsibility of the Canadian Government Office of Tourism in the Department of Industry, Trade and Commerce. It not only provides direct assistance to the industry but also plays a leading role in promoting travel by visitors to Canada and by residents within Canada. By these means it has a significant influence on the nature of travel and the way in which people spend their vacations in Canada. It also assists in the attraction of major meetings and conventions to Canadian centres.

The responsibilities of the Ministry of State for Urban Affairs for co-ordinating all federal programs that have an impact on urban areas include open-space recreation. For the area in and around Ottawa – Hull, the National Capital Commission plays an important role in conserving and developing outdoor recreation. The facilities it provides include the Gatineau Park, an area of 138 square miles, similar to a national or provincial park, a system of scenic driveways and bicycle paths and a greenbelt of land forming a semi-circle of recreational land to the south of Ottawa.

The cultural and artistic aspects of recreation are primarily the responsibility of the Secretary of State. This Department supports the visual and performing arts and a variety of cultural activities in which it encourages citizens to participate.

National Parks

Canada's national parks system began with a 10 square mile reservation of land around the mineral hot springs in what is now Banff National Park. From this nucleus, the system has grown to include 28 national parks which preserve more than 50,000 square miles of Canada's natural areas.

Canada's national parks reflect the amazing diversity of the land. The program now extends from Terra Nova National Park, on the rugged eastern coast of Newfoundland, to Pacific Rim National Park, where breakers pound magnificent Long



Beach on the west coast of Vancouver Island; from Point Pelee, Canada's most southerly mainland point, resting spot for thousands of migratory birds, to Auyuituq National Park on Baffin Island.

Every province and territory has at least one national park. The mountain parks of British Columbia and Alberta, among the oldest in the system, are noted for their craggy peaks, alpine lakes and meadows, glaciers and hot springs. At Waterton Lakes National Park, which together with Glacier National Park of the US forms an international park, the mountains rise dramatically from the prairie, without the usual transitional foothills. Aspen and spruce forests contrast with the surrounding flat farmland in Elk Island National Park, Alta.

Prince Albert National Park, Sask., displays three floral zones — boreal forest, aspen parkland and prairie. Within the park's boundaries are hundreds of lakes, streams, ponds and bogs. In Riding Mountain National Park, situated on the summit of the Manitoba escarpment, northern and eastern forests and western grasslands form a diverse landscape which shelters a broad variety of plant and animal life.

There are four national parks in Ontario — Georgian Bay Islands, Point Pelee, St. Lawrence Islands and Pukaskwa — with Pukaskwa the most recently created, in 1970. In the same year, La Mauricie in the Laurentian Mountains and Forillon on the historic Gaspé peninsula, were established in Quebec. Seven national parks in the Atlantic Provinces conserve areas of acadian and boreal forest, harsh sea coast and sandy beaches, and the lake-dotted interior of Nova Scotia.

There are now four parks located partially or completely above the 60th parallel of latitude. Wood Buffalo National Park, which straddles the Alberta–NWT border, is home to the largest remaining herd of bison on the continent. Kluane, in the Yukon Territory, contains Mount Logan, Canada's highest peak, while in Nahanni National Park, the spectacular Virginia Falls of the South Nahanni River plunge 300 feet to the valley below. Auyuituq, which means in Inuit "the place which does not melt", is Canada's first national park above the Arctic Circle.

The magnificent scenery and numerous recreational possibilities of the national parks attract visitors year round, whether to sightsee, hike, mountain-climb, swim, fish, ski or snowshoe. Interpretive programs, which include guided walks, displays, films and brochures, explain the natural history of the park regions.

National Historic Parks and Sites

To preserve Canada's past, the National Historic Parks and Sites Branch of Parks Canada commemorates persons, places and events of national historic importance in the development of Canada. Since 1917, when Fort Anne, NS, became the first national historic park, more than 80 major parks and sites and over 650 plaques and monuments have been established at sites significant in the history or prehistory of Canada.

Sites are selected on the basis of their cultural, social, political, economic, military or architectural importance, and include major archaeological discoveries. Two finds in Newfoundland are the ancient Indian burial ground at Port aux Choix and the Norse settlement at L'Anse-au-Meadow, believed to have been occupied about 1000 A.D.



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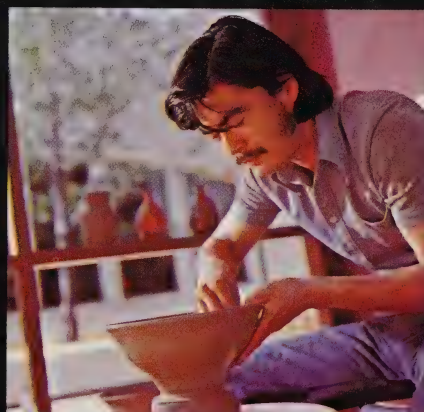
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Craft Displays at Ottawa's Summer Festival.

1. 100-year-old Indian craftswoman displays works of art.
2. Copper engraving.
3. Polish art with paper cut-out designs.
4. Pottery making.



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Many historic parks and sites recall the early exploration of Canada and struggles for its possession. Cartier-Brébeuf Park in Quebec City marks Jacques Cartier's first wintering spot in the New World, and is, in addition, the site of the Jesuit order's first residence in Canada.

The pursuit of furs led to extensive exploration of Canada and construction of many posts and forts to expand and protect the fur trade. Such posts include Port Royal, the earliest French settlement north of Florida; Fort Témiscamingue, a strategic trading post in the upper Ottawa Valley region; and Fort Prince of Wales, the most northerly stone fort in North America. Lower Fort Garry, near Winnipeg, has been restored to recreate a 19th century Hudson's Bay Company post. Here one can see women baking bread, spinning and weaving material at the "Big House", and a blacksmith at work in his shop. Furs, once the mainstay of Canada's economy, hang in the loft above the well stocked sales shop, which was the hub of fort activity.

Military fortifications which have been protected as a national historic sites range from the massive Fortress of Louisbourg on Cape Breton Island, built by the French in the 18th century to protect their dwindling colonial possessions, through a series of French and English posts along the Richelieu and St. Lawrence rivers, to Fort Rodd Hill on Vancouver Island, site of three late 19th century British coastal defences.

The fur-trading posts of Rocky Mountain House in Alberta, Fort St. James in northern BC, and Fort Langley, BC, where the province's salmon export industry began, recall the expansion of trade and settlement in the West. The orderly development of western Canada was due in large part to the North-West Mounted Police, who are commemorated at Fort Walsh, Sask., first headquarters of the force.

The major route to the Klondike Gold Rush is being marked and protected by the Klondike Gold Rush International Historic Park. In Dawson City, boom town of 1898, buildings such as the Palace Grand Theatre and the Robert Service Cabin, as well as the paddlewheeler S.S. Keno, have been restored, while others are in the process of restoration or stabilization.

Province House in Charlottetown, PEI, has recently been named a national historic site. The building continues to serve as the legislative chambers of the province. The childhood homes of two of Canada's prime ministers, Sir Wilfrid Laurier and William Lyon Mackenzie King, have also been protected. Bellevue House National Historic Park in Kingston, a superb example of the "Tuscan Villa" style of architecture, was once occupied by Sir John A. Macdonald.

An historic venture of the 20th century is commemorated at the St. Roch National Historic Site. The RCMP vessel *St. Roch*, skippered by Sgt. Henry Larsen, was the first ship to conquer the Northwest passage in both directions, and is now restored to her appearance in 1944 when she entered Vancouver harbour on the completion of her return voyage through the passage.

Agreements for Recreation and Conservation

In 1972, a new program entitled Byways and Special Places was introduced. This program is now called Agreements for Recreation and Conservation (ARC) to more precisely reflect its purposes. ARC, a long-range program, will include projects carried out by all levels of government, private organizations and individuals.



Replica of a Hudson's Bay Company fort in Alberta's Heritage Park.

ARC is based on the concept of "linear corridors" following waterways or land byways and including natural and historic areas as well as recreational facilities.

The four main components of ARC are historic waterways, wild rivers, historic land trails and motor trails.

Historic waterways. Canada's waterways were major avenues of exploration and transportation, used by the native peoples, the pioneers, the early entrepreneurs and the military. The first ARC agreement, known as the Canada-Ontario Rideau-Trent-Severn (CORTS) agreement, was signed with the Government of Ontario in February 1975, and provides for the development of a waterway which accommodates a variety of recreational activities along an important transportation route in the historical development of Canada.

Wild rivers. Many of Canada's rivers contain long stretches as yet unharnessed for industrial purposes. ARC is making an inventory of such rivers, assessing them for recreational potential, and seeking to preserve parts of Canada's river systems in their natural state.

Historic land trails. A series of land trails, portages and military routes, often interconnected with historic waterways, will provide opportunities for hikers, cyclists and for travellers on horseback to rediscover the history of Canada.

Motor trails. For the motorist tired of high-speed freeways, low-speed motor trails will offer alternative routes through the countryside, with access to picnic areas, campgrounds, recreational areas, nature trails, and wherever possible, national and provincial parks and historic sites.

Provincial Parks

Most provinces have set aside vast areas of land for the conservation of the natural environment and the enjoyment of residents and visitors. Provincial parks cover an area of about 115,000 square miles, which when added to the area of the national parks brings the total federal and provincial park land available to more than 4 acres for each resident of Canada.

Some of the earliest parks in Canada were created by the provinces. In Quebec, the provincial government's concern for the conservation of the caribou in 1895 led

to the establishment of Laurentide Park of which one boundary is only 30 miles north of Quebec City. In Ontario the first park was Algonquin created in 1897. It covers an area of 2,910 square miles and extends to within 150 miles of the city limits of both Toronto and Ottawa. This park like many of the others in Ontario and the other provinces features camping, canoeing and sport fishing.

In 1974 the total number of visits to provincial parks was estimated at over 50 million and the total number of nights spent by campers was about 9 million.

In addition, provincial governments administer a variety of recreational programs; the management of natural resources, hunting and fishing; and the provision of recreational facilities, both directly and through municipal programs.

Travel

An estimated \$7 billion was spent on travel in Canada in 1974 by residents and visitors. In general, a low incidence of travel in the winter, moderate travel in the spring and fall and extensive travel in the summer characterize seasonal travel patterns within Canada.

In the summer of 1974, 7,695,000 persons 14 years of age and over took an average of 2.6 trips per person, for a total of 20,112,000 trips of 100 miles or more from their homes. Over 86 per cent of these trips were by car, and over 7 per cent by plane. The 25-34 age group had the highest proportion of travellers, accounting for over 22 per cent of all travellers. The lowest incidence of travel occurred in the segment of the population 55 years and over.

Bon Echo Provincial Park, Ont. Provincial parks cover an area of about 115,000 square miles.



Receipts and payments on travel between Canada and other countries, 1970-74 (million dollars)

Countries	1970	1971	1972	1973	1974
United States					
Receipts	1,054	1,092	1,023	1,160	1,328
Payments	898	898	919	1,073	1,196
Balance	156	194	104	87	132
Other countries					
Receipts	152	154	207	286	366
Payments	524	550	545	669	782
Balance	-372	-396	-338	-383	-416
All countries					
Receipts	1,206	1,246	1,230	1,446	1,694
Payments	1,422	1,448	1,464	1,742	1,978
Balance	-216	-202	-234	-296	-284

At least one vacation trip of 100 miles or more away from home was taken by 38.7 per cent of the population during the summer of 1974. Of these people, 5,059,000 remained in Canada. The main kinds of accommodation used were homes of friends or relatives (43.2 per cent) and campgrounds (22.0 per cent). The average length of stay for vacationers was 12.1 nights.

In 1974, Canadian resident travellers re-entering from countries other than the US numbered 1.4 million, up 5.4 per cent from 1973. Increases in the cost of living here and abroad and increases in air fares contributed to the slower growth in overseas travel from the 19.0 per cent increase recorded in 1973. In 1973 the average stay of Canadian residents in countries other than the US was 24 nights and the average expenditure for each trip was \$385, excluding fares paid to foreign air-carriers.

Residents of Canada re-entering from the US in 1974 numbered 30.1 million, a decrease of 2.2 per cent from the previous year; of this total, 8.5 million were estimated as having stayed there one or more nights. On a year-to-year basis Canadian residents returning by automobile from the US after one or more nights decreased 29.7 per cent in the first quarter; 13.7 per cent in the second; 1.1 per cent in the third and finally increased 7.7 per cent in the fourth. This trend is consistent with the uncertainty over the supply of gasoline which occurred in the US in the early part of 1974 and the eventual return to a more normal situation after the oil embargo ended in the summer. Canadians visiting the US stayed on average 3.2 days and spent an average of \$9.10 a day in 1973.

In 1974, non-resident travellers from countries other than the US numbered 1.2 million, an increase of 10.4 per cent over 1973. The largest numbers of overseas visitors to Canada in 1973 were from the United Kingdom, the Federal Republic of Germany, France and Japan. The provinces these visitors most frequently stated as their destinations were Ontario, Quebec and British Columbia. The vast majority of visitors to Canada, however, continue to come from the US, numbering 35.2 million in 1973, down 5.4 per cent from the previous year.

Visitors from countries other than the US in 1973 stayed on average 14.8 nights in Canada and spent \$181. The average length of stay of American travellers in Canada in 1973 was 2.8 days and their average expenditure was \$10.30 a day. The majority of travellers came from the Eastern seaboard and the Great Lakes states. The main destinations reported were Ontario and Quebec. The most quoted reason for non-resident travellers from countries other than the US entering Canada in recent years has been to visit friends and relatives. This is probably a reflection of the fact that at the time of the 1971 population census, 3.3 million Canadians were recorded as having been born outside Canada.

Preliminary estimates for the year 1974 show that Canada recorded a travel account deficit of \$284 million with all countries compared to a deficit of \$296 million in the previous year. Total receipts of \$1,694 million for international travel, of which 78.4 per cent came from the US, were more than offset by the spending of \$1,978 million abroad. Of the total payments, 60.5 per cent or \$1,196 million were spent on travel to the US. For the last 10 years the travel account with the US has been in surplus as US residents have spent more on travel in Canada than Canadian residents spending in the US. However, Canada traditionally records a deficit on overseas travel. These travel account estimates include transportation costs paid to Canadian carriers by non-residents entering Canada and fares paid to foreign carriers by residents of Canada.

Massed pipe bands at the Highland Games in Maxville, Ont. draw a multitude of tourists.



The Mass Media

The Press

In September 1974, Canada had 115 daily newspapers with circulation of more than 4.8 million and serving more than 90 communities. Thirteen of the dailies published in French. Toronto was also served by dailies in Italian and Chinese, and Vancouver by a Chinese daily.

Most daily newspapers are under some form of group ownership and 12 of the ownership groups accounted for three quarters of the daily newspaper circulation.

The number of newspapers publishing once or twice a week stood at more than 950 in 1974 and their circulation topped 3 million. Their service areas included both rural communities and the suburbs of metropolitan areas. Approximately 175 were published in French and about 70 were published in languages other than French or English, ranging from Croat to Ukrainian.

In the periodical field, some 500 publications served the business and professional communities, reaching about 1 million readers. There were 67 periodicals specifically directed at the farm audience in 1974.

Cultural and recreational fields were covered by some 300 publications—weeklies, monthlies and quarterlies—dealing with the arts, radio and television, entertainment, music, travel, sports, hobbies and religion.

The National Film Board

The National Film Board of Canada (NFB), created by an Act of Parliament in 1939, continues its original mandate to produce and distribute films in the national interest. Its productions reflect the Board's involvement in contemporary affairs and strong interest in national unity. Currently, the problems of environment, ecology and energy resources hold a special focus. The environment production group has organized an extensive program of more than 40 films concerning these issues.

The NFB produces approximately 150 films a year in French or English, ranging from one-minute TV spots to two-hour documentaries and feature films. Over the years, NFB films have earned more than 1,600 awards from various competitions and festivals around the world.

Currently, estimated world audience for NFB films is some 800 million. Films are booked out at a rate of some 400,000 times a year from NFB film libraries in 27 major cities across Canada. With this great demand, the need to supply communities more efficiently has led to introducing self-service in a number of NFB libraries. To encourage the development of community film distribution services, the Board offers a discount to libraries purchasing films in quantity to serve their community. Abroad, through the Department of External Affairs and through commercial distribution, films reach 139 countries. Commercial bookings in Canadian theatres are now over the 19,000 mark.

To help Canadians teaching or learning one or the other of Canada's official languages, the Board has produced a series of language learning drama films which are distributed with suitable support materials for teachers. In keeping with Cana-

da's multicultural character, the Film Board is distributing in Canada approximately 900 prints of 356 different films in 19 languages. These films are located in five main regional libraries.

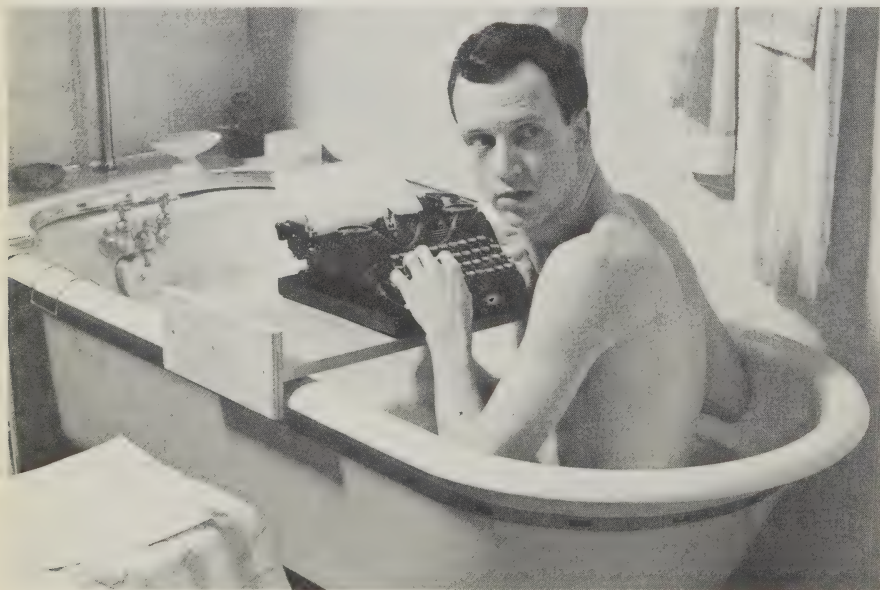
In co-operation with the Department of National Health and Welfare the Film Board has compiled a package of films on the non-medical use of drugs. These are now available to the public through NFB and other film libraries across Canada. The package will also include films on alcohol and tobacco addiction. In response to the Department's interest and to the many requests from deaf people the NFB is planning to develop, for the Department of National Health and Welfare, an audio-visual program for the deaf, including the captioning of many NFB and private industry films.

The Board's production facilities are being expanded outside operational headquarters in Montreal to put film-makers in closer touch with the people of the various regions of Canada. The Vancouver production office has been expanded, a Halifax office opened in 1973, an office opened in Winnipeg in 1974, another opened in Toronto this year and there are plans for an office in Quebec City.

The Still Photography Division promotes the work of Canadian photographers by organizing travelling exhibits and publishing some outstanding works, most recent of which is the highly acclaimed colourful book *Canada*. A permanent photo gallery is maintained in Ottawa.

Among the NFB feature length fiction films released in Canadian theatres is *Why Rock the Boat?*, a newspaper comedy, and *Partis Pour la Gloire*, a country people's fight against World War II conscription.

Why Rock the Boat?, a newspaper comedy by the National Film Board.



The Film Board's contribution to Canadian Broadcasting Corporation/Radio Canada national prime-time network programming is continuing. *Action: The October Crisis of 1970* was aired in both French and English on CBC and Radio Canada TV. A two-and-a-half hour evening of films about the Maritimes called *Atlanticanada* was televised on CBC and films from *En Tant que Femmes*, a series of films about women were shown on Radio Canada, the latest one being *Le Temps de l'Avant*.

The *Challenge for Change* project and its French counterpart *Société Nouvelle*, has come to the end of its first five-year mandate. Set up "to improve communications, create greater understanding, promote new ideas and stimulate social change", the films and projects are provoking a frank examination of the status quo in Canada today. The project's film-makers are also helping community groups use film and videotape equipment themselves to stimulate social action and self-awareness.

Private Film and Television Production

Film and television production in the private sector has become increasingly more competitive during the past three years. By July 31, 1974, some 300 companies in Canada were engaged in various aspects of motion picture and television production. The apparently rapid growth can be attributed to the large number of technical and creative people who are freelancing and also to the large number of individuals graduating from film and television courses across the country. Of those who were unable to secure employment with an established production house, many have set up their own companies.

During the period from August 1, 1973 to July 31, 1974, over 5,000 film and videotape productions were completed which produced a total revenue of over \$40 million. Although the production of feature films has severely declined, television commercial and sponsored documentary productions made significant gains. Federal and provincial government film and television contracts tendered to the private sector have provided part of the increased number of such films.

One particularly interesting development has occurred within the industry. In past years, private television and motion picture producers have on the whole operated independently. Recently, the two groups have joined forces under a new name, the Canadian Film and Television Association, formerly the Association of Motion Picture Producers and Laboratories of Canada. This new association with a large, strong membership will be responsible for all the industry's dealings with governments, certain negotiations of union contracts, liaison with educational institutions, and the over-all development of motion picture and television production in Canada.

The Canadian Radio-Television Commission

The Broadcasting Act of 1968 vested authority to regulate and supervise all aspects of the Canadian broadcasting system — radio, television and cable television — in the Canadian Radio-Television Commission (CRTC).

Canadian broadcasting in 1975 was extended through additional service and new

stations, covering more of Canada and reaching more Canadians. Thirty-six new AM and 20 new FM radio stations came into operation, with 73 new television stations and 32 new cable television systems. Television service in Canada reaches at least 97 per cent of the population, while radio reaches at least 98 per cent of the population. By the end of 1975 it is estimated that 75 per cent of the Canadian households will have access to cable television service. As of March 31, 1975, 1,894 licenced broadcasting undertakings were in operation in Canada. This includes 401 AM and 121 FM radio stations, 283 low power relay transmitters, 661 television and 419 cable television undertakings and nine shortwave transmitters.

In the past year, the CRTC has initiated several new policies and major directions. Early in 1975 the CRTC issued an extensive policy paper on FM radio. The policy and subsequent amendments to existing FM radio regulations are the Commission's definitive statement on FM in the privately owned sector of the Canadian broadcasting system. The Commission believes four distinct radio services can be foreseen for Canada — public AM, public FM, private AM and private FM. The CRTC's objectives for these services are "the maintenance and development of two distinct CBC radio services in accordance with CBC radio policy, the maintenance and development of a lively private AM radio sector, and the addition of a new style of private radio on FM." Within these broad objectives the FM policy's main argument is that FM radio must become recognizably different from private AM radio as it now exists, and offer high quality programming of wider range in "information, enlightenment and entertainment." The policy is to be implemented over the next five years. In 1975, the Commission also published regulations and position papers dealing with cable television service in Canada. The areas of concern were proposed regulations on cable television and position papers on the community channel, carriage of radio service on cable, converter service, the supplementary programming channel and pay television. While public hearings have now been held on the questions raised by the policy proposals a definitive policy has not yet been announced by the Commission.

A third area of concern to the Commission in the past year has been that of programming. A number of decisions throughout the year stressed the responsibility of broadcasters to provide their audiences with local programming, and to make their facilities accessible for local input. In addition, a number of new community oriented broadcasting stations have been licensed.

The CRTC's 15 commissioners — five full-time including the Chairman and the Vice-Chairman, plus 10 part-time members selected regionally — hold a number of public hearings each year in centres across the country. In the fiscal year ending March 31, 1975, 23 hearings were held across the country from British Columbia to the Maritimes. The Commission in this way ensures that all decisions and policies receive a maximum of open public debate, in an effort to ensure that the national trust of the airwaves is protected for the people of Canada.

The Canadian Broadcasting Corporation

The CBC is a publicly owned corporation established by the Broadcasting Act "for the purpose of providing the national broadcasting service" in Canada. The CBC was created on November 2, 1936, replacing an earlier public agency, the Canadian



Les Beaux Dimanches (Les Ballets de Bali), a CBC French television production.

Radio Broadcasting Commission, which had been operating since 1932. The CBC reports to Parliament through the Secretary of State. It is financed mainly by public funds voted annually by Parliament, and obtains additional revenue from commercial advertising. The directors and officers of the CBC are responsible for its policies and operations.

CBC facilities extend from Atlantic to Pacific and into the Arctic Circle. The head office of the Corporation is in Ottawa. The network centre for English-language radio and television is in Toronto, with regional production centres in each of the main geographical areas of the country. French-language operations are centred in Montreal, with local outlets at other points in Quebec and in most other provinces. Altogether the CBC employs between 9,000 and 10,000 people.

The CBC Northern Service provides northern communities with national, local and shortwave radio programs, and with national television. Live network television service is provided to some 25 communities in the North by way of the Anik domestic communications satellite. Community television in the North will be developed as local facilities become available.

Radio Canada International, the CBC's shortwave service, has its headquarters in Montreal and its transmitters near Sackville, NB. It broadcasts daily in 11 languages to Europe, Africa, Latin America, the Caribbean area, North America and Australasia. It also distributes music and spoken-word transcriptions to broadcasting organizations in other countries.

In other international activities the CBC sells a variety of its programs to other countries, is a frequent winner of international program awards, and belongs to international broadcasting organizations such as the *Communauté des télévisions francophones* and the Commonwealth Broadcasting Conference. The CBC Armed Forces Service, in co-operation with the Department of National Defence, provides recorded and shortwave radio programs for Canadian military bases abroad. The CBC maintains offices in London, Paris, New York and Washington, as well as news bureaus in Moscow, the Far East and Lima, Peru.

CBC program schedules are varied, reflecting the principle set out in the 1968 Broadcasting Act that "the national broadcasting service should be a balanced service of information, enlightenment and entertainment for people of different ages, interests and tastes covering the whole range of programming in fair proportion." Program content is largely Canadian: it reaches 70 per cent in television and usually more in radio, with a selection of programs from other countries. The CBC is the major employer of Canadian talent, paying performers fees of over \$20 million a year. It provides continuing support for the arts in Canada through such means as the broadcast of Canadian music, drama and poetry; the commissioning of special works; the sponsorship of talent competitions; and the presentation of Canadian films. The CBC presents local public concerts in many communities and participates in international program festivals and competitions. It gives co-production assis-

Kidstuff, a new entertaining and educational program on CTV.



tance to independent Canadian producers, and produces books and recordings derived from selected programs.

CBC coverage of the country is substantially complete, with CBC radio service accessible to 98.8 per cent of Canadians and CBC television to 97.8 per cent. In all there are more than 460 outlets for CBC radio (including CBC stations and privately owned affiliates plus auxiliary relay transmitters) and more than 431 for CBC television. An accelerated coverage program has been approved, costing \$50 million. During the next five years this program will bring radio and television service to some 500 remote communities not now served or inadequately served.

Private Radio and Television

Incorporated in 1926, the Canadian Association of Broadcasters (CAB) is a voluntary trade association representing more than 90 per cent of Canada's private radio and television stations: 261 AM stations, 61 FM stations, 57 television stations, many rebroadcasting stations, 76 associates (including several universities) and three networks.

Since commencing a major internal restructuring in 1973, CAB has hired a new president, a director of government and public relations and a co-ordinator to initiate research and update the existing library. A five-year plan of action has been established. The Toronto and Montreal branches have been closed to centralize all activities in Ottawa and stereo recording facilities have been installed. Key ongoing CAB functions include appearances before legislative, judicial and regulatory bodies and exchanges of information with business, academic, political, consumer and citizens' groups.

Approximately 11,000 persons are employed full-time in private radio and television and hundreds are hired on a freelance, or part-time basis.

More than 97 per cent of all homes in Canada have at least one radio and television set, 73 per cent have FM radio and a growing percentage now have colour TV. Canadians watch television or listen to radio an average of 60 hours weekly.

Less well-known CAB functions include gathering and distributing many Canadian and some foreign programs; producing *Report From Parliament Hill*, a non-partisan radio series of reports by Members of Parliament, which has run on 75 stations since 1944; sponsoring, for several years, the Dominion Drama Festival; and co-ordinating "in-station" training in co-operation with colleges and universities. CAB functions also cover publishing many informative booklets and brochures such as *Careers in Broadcasting*, which was expanded and updated in 1975, organizing an intensive series of regional seminars on matters of vital importance to broadcasting and initiating national seminars on *FM of the Future*, *Expectations* and *CAN PRO*, which encourages more and better local program productions.

Perfection of an effective code for advertising to children has been a prime CAB project for several years and CAB is a founding member of the Children's Broadcast Institute, which is devoted to improving children's programs. Early in 1975, CAB also established a fund to initiate research into the subject of violence on television.

CAB presents annual awards for achievements in programming, news and major engineering improvements.

governments and their services

Government

Canada is a federal state, established in 1867. In that year, the British Parliament, at the request of three separate colonies (Canada, Nova Scotia and New Brunswick), passed the British North America (BNA) Act, which “federally united” the three “to form . . . one Dominion under the name of Canada.” The Act merely embodied, with one modification (providing for the appointment of extra Senators to break a deadlock between the two Houses of Parliament) the decisions which delegates from the colonies, the “Fathers of Confederation,” had themselves arrived at.

The Act divided the Dominion into four provinces. The pre-Confederation “province of Canada” became the provinces of Ontario and Quebec; Nova Scotia and New Brunswick retained their former limits. In 1870, the Parliament of Canada created Manitoba; in 1871, British Columbia and in 1873 Prince Edward Island entered the Union. In 1905, the Parliament of Canada created Saskatchewan and Alberta, and in 1949 Newfoundland came in.

The BNA Act gave Canada complete internal self-government, and gradually the country acquired full control over its external affairs also. It is now a fully sovereign state, except that a few (but very important) parts of its Constitution can be changed

only by Act of the British Parliament. This limitation, however, is purely nominal. The British Parliament invariably passes any amendment requested by the Canadian. The only reason the full power of amendment has not been transferred to Canada is that Canadians have not been able to agree on any amending formula.

The BNA Act gave the Canadian Parliament power to "make laws for the peace, order and good government of Canada in relation to all matters . . . not . . . assigned exclusively to the Legislatures of the provinces." To make assurance doubly sure, the Act added a list of examples of this general power. These included defence; raising money by any kind of taxation; regulation of trade and commerce; navigation and shipping; fisheries; money and banking; bankruptcy and insolvency; interest; patents and copyrights; marriage and divorce; criminal law and criminal procedure; penitentiaries; interprovincial and international steamships, ferries, railways, canals and telegraphs; and any "works" declared by Parliament to be "for the general advantage of Canada." Amendments have added unemployment insurance, and power to amend the Constitution except in regard to the division of powers between Parliament and the provincial legislatures, the rights guaranteed to the English and French languages, the constitutional rights of certain religious denominations in education, the requirement of an annual session of Parliament and the maximum duration of Parliament.

The Act of 1867 gave Parliament and the provincial legislatures concurrent power over agriculture and immigration (with the national law prevailing over the provincial in case of conflict); and amendments provided for concurrent jurisdiction over pensions (but with provincial law prevailing in case of conflict).

Decisions by the Judicial Committee of the British Privy Council (the final court of appeal for Canada until 1949) made the examples of the "peace, order and good government" power almost swallow up the general power of which they were supposed to be examples. The general power came to mean little more than jurisdiction to pass temporary laws to meet wartime emergencies. But judicial decisions also interpreted Parliament's powers to cover interprovincial and international telephones and interprovincial and international highway traffic and all air navigation and broadcasting.

The BNA Act established a limited official bilingualism. In debates in both Houses of Parliament, members may use either English or French; the records and journals of both Houses must be kept in both languages; Acts of Parliament must be published in both; and either language may be used in any pleading or process in courts set up by Parliament. The same provisions apply to the legislature and courts of Quebec.

In fact, the Government and Parliament of Canada, and the governments and legislatures of Quebec, Ontario, New Brunswick and Newfoundland, have extended bilingualism beyond the constitutional requirements. The whole of the central administration at the national capital, and anywhere there is a sufficient French-speaking or English-speaking minority, is now being thoroughly bilingualized. In 1969, Parliament adopted the Official Languages Act which declared that English and French enjoy equal status and are the official languages of Canada for all purposes of the Parliament and Government of Canada.

Except for limited official bilingualism, and certain educational rights for some religious minorities, the Canadian Constitution provides no specific protection for

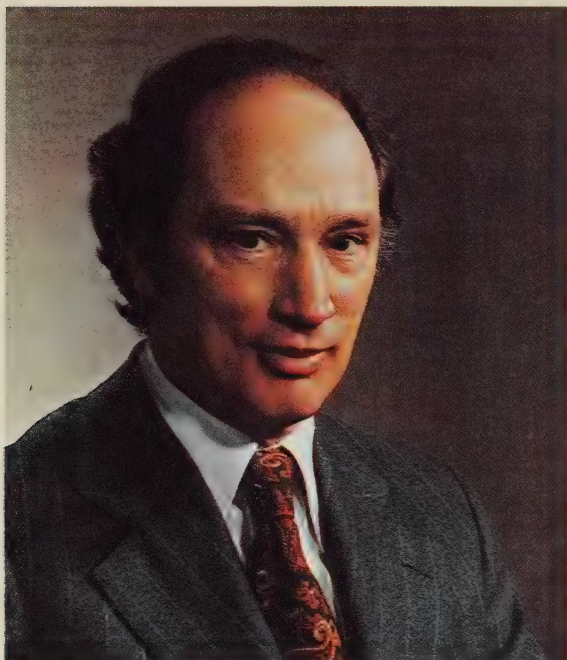


basic rights like freedom of worship, of the press and of assembly. Such rights are protected by the ordinary law; but all of them could be curtailed or abolished by Parliament or the provincial legislatures. Such action would be contrary to the Canadian tradition, however. Indeed, in 1960 the Parliament of Canada adopted a Bill of Rights and the present government has proposed Human Rights legislation, providing for an ombudsman to protect the rights of the citizen.

Each provincial legislature has exclusive power over the amendment of the provincial Constitution (except as regards the office of Lieutenant Governor, the legal head of the provincial executive): natural resources; direct taxation for provincial purposes; prisons; hospitals; asylums and charities; municipal institutions; licences for provincial or municipal revenue; local works and undertakings; incorporation of provincial companies; solemnization of marriage; property and civil rights; the administration of justice (including the establishment of courts, civil and criminal, and civil procedure); matters of a merely local or private nature; and education, subject to certain safeguards for denominational schools in Newfoundland and Protestant or Roman Catholic schools in the other provinces. Judicial decisions have given "property and civil rights" a very wide scope, including most labour legislation and much of social security.

The Canadian Constitution

The BNA Act and amendments form the basic law of the Canadian Constitution. But they provide only a skeleton framework of government. This is filled out by judicial interpretation, by various Acts of Parliament and the legislatures, and, most of all, by custom or "convention": the generally accepted understandings about how the legal machinery should be worked. A person taking the BNA Act literally would think Canada was governed by an absolute monarch. In fact, the monarch's



*The Prime Minister of Canada
the Rt. Hon. Pierre Trudeau.*

powers are exercised, as the Fathers of Confederation put it, "according to the well understood principles of the British Constitution": that is, according to the usages and understandings which gradually transformed the British monarchy into a parliamentary democracy. These conventions Canada has inherited and adapted to suit her own needs.

The Government of Canada

The Executive. By free and deliberate choice of the Fathers of Confederation, Canada is a constitutional monarchy. The executive government "is vested in the Queen" of Canada (who is also Queen of Britain, Australia and New Zealand). In strict law, her powers are very great. In fact, they are exercised on the advice of a Cabinet responsible to the House of Commons which is elected by the people.

For most purposes, the Queen is represented by the Governor General (now always a Canadian), whom she appoints, on the advice of the Canadian Cabinet, for a period of, normally, five to seven years. In very extraordinary circumstances, the Governor General may act on his own. For instance, if the Prime Minister dies, the Governor General must choose a new one from the party with a majority in Parliament, to hold office until that party can choose a new leader. Again, if a Cabinet came out of an election with less than half the seats in Parliament, and asked for an immediate election, the Governor General would have to refuse, since a newly elected Parliament must at least be allowed to meet and try to transact public business.

Except in such extraordinary circumstances, however, the Queen or the Governor

General must act on the advice of the Cabinet, or, in a few cases, of its head, the Prime Minister. The Prime Minister appoints the members of the Cabinet; decides when Parliament shall meet; and normally decides when a new Parliament shall be elected (though there must be an election at least every five years, unless war, invasion, or rebellion makes it impossible). The Cabinet appoints the members of the Senate (the Upper House of Parliament), the judges of the superior, district and county courts and the Lieutenant Governors of the provinces. It can annul any provincial law within one year of its passing. In the name of the Queen and the Governor General, it provides direction to the Armed Forces, appoints public servants, pardons criminals, declares war, makes peace, appoints ambassadors, makes and ratifies treaties and makes regulations within the limits set by Acts of Parliament.

Both the Cabinet and the Prime Minister are nearly unknown to the law. The BNA Act provides only for a "Queen's Privy Council for Canada," appointed by the Governor General to "aid and advise" him. In fact, this body does nothing. It consists of all Cabinet Ministers, all former Ministers, ex-Speakers of both Houses, the Chief Justice, ex-Chief Justices, and various distinguished citizens appointed as a mark of honour. Its only practical importance is that it provides the legal basis for the Cabinet, which, legally, is simply "the Committee of the Privy Council."

The Cabinet consists of those Privy Councillors whom the Prime Minister invites to its meetings. In practice, this means the heads of all departments and ministries, and usually also a few ministers of state without departments or ministries. In November 1972, the Cabinet had 30 members: the Prime Minister, 27 heads of departments, and two ministers without portfolio. Usually, there is one Senator without portfolio. By custom, all ministers must have a seat in one House or the other, or get one within a reasonable time.

The Cabinet has no fixed term. It holds office till the Prime Minister dies or resigns. Sir Wilfrid Laurier's Cabinet lasted for over 15 years, Sir John A. Macdonald's second Cabinet for almost 13.

If an opposition party wins more than half the seats at a general election, the Cabinet resigns, and the Governor General calls on the leader of the victorious party to become Prime Minister. The new Prime Minister chooses his Cabinet from his own party. It is customary, insofar as representation in Parliament permits, for the Cabinet to include at least one minister from every province, with the more populous provinces receiving greater representation.

The Cabinet must speak as one on all questions of government policy. A minister who cannot support that policy must resign. Each minister of a department is answerable to the House of Commons for that department and the whole Cabinet is answerable to the House for government policy and administration generally. If the Cabinet is defeated in the House on a motion of want of confidence, it must either resign office—when the Governor General will call on the Leader of the Opposition to form a new Cabinet—or seek dissolution of Parliament, leading to a general election—generally the latter nowadays.

Defeat of a major government bill will ordinarily be considered a vote of want of confidence and lead to the same consequences. But the Cabinet can choose to consider any such defeat not decisive. It is then open to the House to vote straight want of confidence.

Only the Cabinet can introduce bills for the raising or spending of public money. Ordinary members of the House of Commons can move to reduce proposed taxes or expenditures, but not to raise them. The rules of the House allot most of its time to Cabinet business, and nearly all legislation now comes from the Cabinet. The Cabinet also has the sole power to move closure, cutting off debate; and if the parties fail to agree, the Cabinet can move to fix a time-table for the various stages of a bill. But the rules are careful also to provide abundant opportunity for the Opposition to question, criticize and attack. Twenty-five days of each parliamentary session are specifically allotted to the Opposition to debate any subject it pleases, and on six of those days it can move want of confidence.

The Legislature

Parliament. Parliament consists of the Queen, the Senate and the House of Commons. The Senate has 104 members, appointed by the Cabinet: 24 from Ontario, 24 from Quebec, 24 from the Maritime Provinces (10 each from Nova Scotia and New Brunswick, 4 from Prince Edward Island), 24 from the western provinces (6 each), 6 from Newfoundland, and 1 each from the Yukon Territory and the Northwest Territories. Senators now retire at age 75.

The BNA Act gives the Senate exactly the same powers as the House of Commons, except that money bills must originate in the Commons. The Senate can reject any bill, but rarely does. It does most of the work on private bills (incorporation of



Prince Charles enjoyed a six-day tour of Canada's North in April 1975.



The Queen Mother celebrated her 75th birthday on August 4, 1975.

companies, and so on), and subjects general legislation to careful scrutiny in committee. Special Senate committees have also investigated major public problems and produced valuable reports. In October 1975, the Senate had 72 Liberals, 1 Independent Liberal, 17 Progressive Conservatives, 2 Independent, 1 Social Credit and 11 vacancies.

The House of Commons, to which alone the Cabinet is responsible, has 264 members: 7 from Newfoundland, 11 from Nova Scotia, 10 from New Brunswick, 4 from Prince Edward Island, 74 from Quebec, 88 from Ontario, 13 each from Manitoba and Saskatchewan, 19 from Alberta, 23 from British Columbia and 1 each from the Yukon Territory and the Northwest Territories. They are elected by single-member constituencies, broadly speaking in proportion to the population of each province; but no province can have fewer members in the Commons than in the Senate. The total number of members is redistributed after each decennial census. Any adult Canadian citizen (with obvious exceptions, such as people in jail) can vote. In October 1975 the Liberals had 140 members, the Progressive Conservatives 95, the New Democratic Party 16, the Social Credit Party of Canada 11, Independent 1 and 1 vacant seat.

All legislation goes through three "readings." The first is purely formal. On the second, the House gives the bill "preliminary consideration," and if satisfied, refers it to a committee, where it is dealt with clause by clause. Money bills, and such others as the House thinks fit, are referred to the Committee of the Whole, that is, the whole House, sitting under special rules facilitating detailed discussion. All other

bills are sent to one of the 18 "Standing Committees" (12 to 30 members each) which specialize in a certain subject or subjects. The appropriate committee then reports the bill to the House, with or without amendments, and at this stage any member may propose amendments, which are debatable. Then comes third reading. If the bill passes this, it is sent to the Senate, where it goes through much the same procedure.

The Canadian Constitution would be unworkable without political parties. Yet parties are almost unknown to Canadian law: a notable example of the conventions of the Constitution. They make possible a stable government, capable of carrying its policies into effect. They provide continuous organized criticism of that government. They make possible an orderly transfer of power from one government to another. They help to educate the electorate on public affairs and to reconcile divergent elements and interests from different parts of the country.

The Liberal party has its roots in the pre-Confederation Reform parties which struggled for the establishment of parliamentary responsible government in the 1840s. The Progressive Conservative party goes back to a coalition of moderate Conservatives and moderate Reformers in the province of Canada in 1854, six years after responsible government had been won. It was broadened into a national party in 1867, when Sir John A. Macdonald, the first national Prime Minister, formed a Cabinet of eight Conservatives and five Liberals or Reformers, whose followers soon became known as "Liberal-Conservatives." The present name was adopted in 1942. The New Democratic Party dates from 1961, when the major trade union federation (the Canadian Labour Congress) and the Co-operative Commonwealth Federation (CCF) party joined forces to launch a new party. The CCF had been founded in 1932 by a group of farmer and labour parties in the western provinces. The Social Credit Party of Canada is based on the monetary theories of Major Clifford Douglas and, in 1975, its members in the House of Commons were all from Quebec.

Provincial and Territorial Government

In each province, the machinery of government is substantially the same as that of the central government, except that no province has an Upper House.

Most of northern Canada west of Hudson Bay is not part of any province. It is organized in two territories, the Yukon Territory and the Northwest Territories, which come directly under the Government and Parliament of Canada but enjoy a growing degree of self-government.

The Yukon Territory is ruled by a Commissioner, appointed by the Government of Canada, and an elected Council of seven. The Commissioner in Council can pass laws dealing with direct taxation for local purposes, establishment of territorial offices, sale of liquor, preservation of game, municipal institutions, licences, incorporation of local companies, solemnization of marriage, property and civil rights and matters of local and private nature.

The Northwest Territories are ruled by a Commissioner, appointed by the Government of Canada, and a council of 14, of whom 4 are appointed by the central government and 10 elected. The Commissioner in Council has substantially the same powers as in the Yukon Territory.



*Dominion Day celebration
on Parliament Hill in
Ottawa, Ont.*

Municipal Government

Municipal government, being a matter of provincial jurisdiction, varies considerably. All municipalities (cities, towns, villages and rural municipalities) are governed by an elected Council. In Ontario and Quebec, there are also counties, which, for certain purposes, group smaller municipal units, and both these provinces have begun to set up regional municipalities for metropolitan areas.

In general, the municipalities are responsible for police and fire protection; local jails, roads and hospitals; water supply and sanitation; and schools (often administered by distinct boards elected for the purpose). They get their revenue mainly from taxes on real estate, permits, licences and grants from the provinces. The total number of municipalities is now about 4,500.

The Legal System

The legal system is an important element in Canadian government. Since the British North America (BNA) Act established Canada as a federal state the Canadian legal system is somewhat complex.

The Law and Law-making

The law in Canada consists of statutes and judicial decisions. Statutes are enacted by Parliament and the provincial legislatures and are written statements of legal rules in fairly precise and detailed form. There is also a large body of case law which comes mainly from English common law and consists of legal principles evolved by the decisions of the superior courts over a period of centuries.

The English common law came to Canada via the early English settlers. It is the basis of much of the law in all provinces and territories as well as of much federal law. The province of Quebec, however, was originally settled by French inhabitants who brought with them civil law derived from French sources. Thus, in Quebec, civil law principles govern such matters as personal, family and property relations. Quebec has developed its own Civil Code and Code of Civil Procedure governing these and other matters, and has, in effect, adapted the French civil law to meet Quebec's needs.

In addition to the statutes of the federal Parliament and provincial legislatures,



The Royal Canadian Mounted Police (RCMP) was originally created in 1873, under the name North-West Mounted Police.

there is a vast body of law contained in regulations adopted by appropriate authorities, as well as in by-laws made by municipalities. This subordinate legislation, as it is called, is issued under authority conferred either by Parliament or the provincial legislatures.

Statutes enacted by the federal Parliament of course apply throughout the country; those enacted by provincial legislatures, only within the territorial limits of the province. Hence, variations may exist from province to province in the legal rules regulating an activity governed by provincial law.

The main body of Canadian criminal law, being federal, is uniform throughout the country. Although Parliament has exclusive authority under the BNA Act to enact criminal law, the provincial legislatures have the power to impose fines or punishments for breaches of provincial laws. This gives rise to provincial offences, for example, the infraction of a provincial statute regulating the speed of automobiles travelling on the highways.

Most Canadian criminal law is contained in the Criminal Code derived almost exclusively from English sources. Criminal offences are classified under the Code as indictable offences which are subject to a severe sentence, or summary conviction offences to which a less severe sentence applies. The totality of statutory federal criminal law is not contained in the Criminal Code. Other federal statutes provide for the punishment of offences committed thereunder by fine or imprisonment or both. In any event, whether an offence be serious or minor it is a fundamental principle of Canadian criminal law that no person may be convicted unless it has been proved beyond all reasonable doubt to the satisfaction of either a judge or a jury that he is guilty of the offence.

Law Reform

As society changes, as its needs and even its standards change, the law will have to reflect these changes. Therefore, many of the provinces now have Law Reform Commissions which inquire into matters relating to law reform and make recommendations for this purpose. At the federal level, the Law Reform Commission of Canada carries out this activity by studying and reviewing federal law with a view to making recommendations for its reform.

The Courts and the Judiciary

The legal system includes courts, which play a key role in the process of government. Acting through an independent judiciary, the courts declare what the law is and apply it to resolve conflicting claims between individuals, between individuals and the state and between the constituent parts of the Canadian federation.

The Judiciary

Because of the special function performed by judges in Canada the BNA Act guarantees the independence of the judiciary of superior courts. This means that judges are not answerable to Parliament or the executive branch of the government for decisions rendered. A federally appointed judge holds office during good

behaviour, but is removable from office by the Governor in Council on the address of the Senate and House of Commons, and, in any event, ceases to hold office upon attaining the age of 75 years. The tenure of judges appointed by provinces to inferior courts is determined by the applicable provincial laws. No judge, whether federally or provincially appointed, may be subjected to legal proceedings for any acts done or words spoken in a judicial capacity in a court of justice.

The appointment and payment of judges reflect the interlocking of the divided powers found in the Canadian constitutional system. The federal government appoints and pays all judges of the federal courts, as well as judges of the provincial superior and county courts, while judges of provincial inferior courts are appointed and paid by the provincial governments.

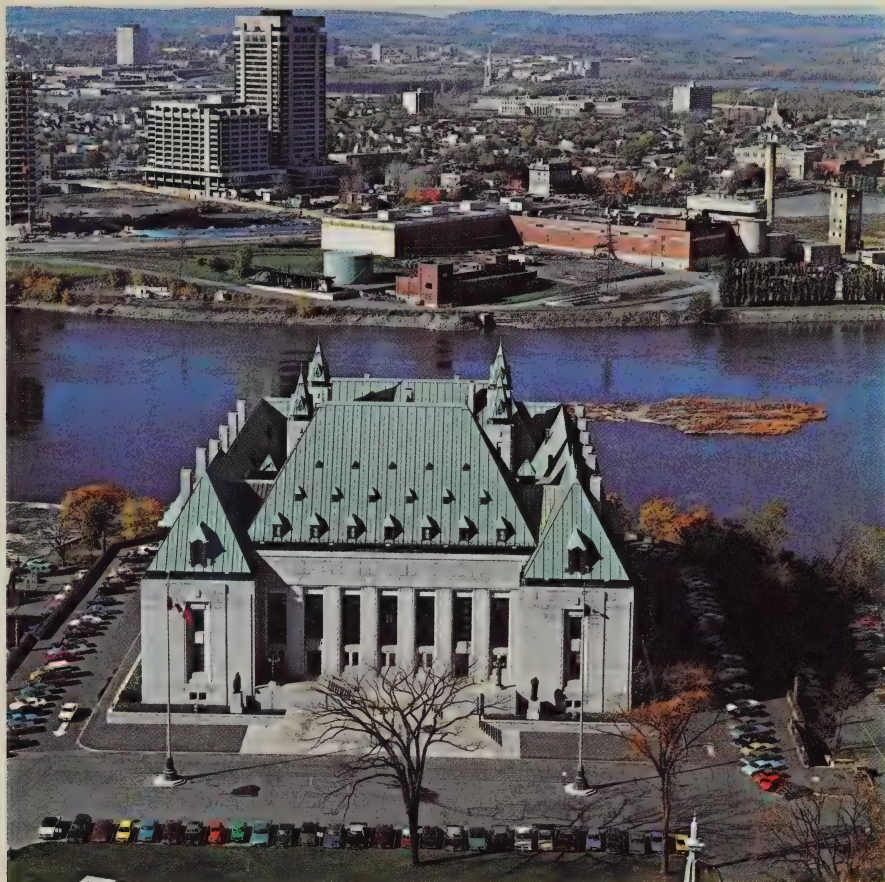
The Courts

In Canada, the power to create courts is divided. Some courts are created by Parliament, for example, the Supreme Court of Canada, and others by provincial legislatures, for example, superior courts, county courts and many lesser provincial courts. However, the Supreme Court of Canada and provincial courts are part of an integrated whole; thus, appeals may be made from the highest courts of the provinces to the Supreme Court. Generally speaking, federal and provincial courts are not necessarily given separate mandates as to the laws that they administer. For instance, although criminal law is made by the Parliament of Canada, it is administered mainly in provincial courts.

Federal courts. Federal courts in Canada include the Supreme Court of Canada, the Federal Court of Canada and various specialized tribunals such as the Tax Review Board, the Court Martial Appeal Court and the Immigration Appeal Board. These courts and tribunals are created by Parliament.

The Supreme Court, established in 1875, is the highest appeal court of Canada in civil and criminal matters. The Court consists of nine judges of whom three at least must come from Quebec, a requirement added because of the special character of Quebec civil law. The conditions under which appeals are heard by the Court are determined by the statute law of Parliament. The Court entertains appeals from the provincial Courts of Appeal and from the Federal Court. It also gives advisory opinions to the federal government, when asked under a special reference procedure. Five judges normally sit together to hear a case although on important matters it is customary for all judges of the Court to sit.

The Federal Court of Canada was created in its present form in 1970; its predecessor, the Exchequer Court of Canada, was originally created in 1875. It has two divisions, a Trial Division and an Appeal Division. This Court deals with taxation cases; claims involving the federal government (for instance, claims against the federal government for damage caused by its employees); cases involving trademarks, copyrights and patents; admiralty law cases; and aeronautics cases. The Appeal Division hears appeals from decisions rendered by the Trial Division of the Court, as well as appeals from decisions rendered by many federal boards and agencies.



The Supreme Court of Canada celebrated its centennial in 1975. The cornerstone for the Supreme Court building in Ottawa was laid in 1939.

Provincial courts. Provincial courts are established by provincial legislation and thus their names vary from province to province; but nevertheless their structure is roughly the same.

Provincial courts exist at three levels. Each province has inferior courts, such as family courts, juvenile courts, magistrates' courts and small debts courts. In these courts which deal with minor civil and criminal matters, the great majority of cases originate and are decided. With the exception of the province of Quebec all provinces have a system of county or district courts. These courts have intermediate jurisdiction and decide cases involving claims beyond the jurisdiction of the small debts courts, although they do not have unlimited monetary jurisdiction. They also hear criminal cases except those of the most serious type. In addition to being trial courts, county and district courts have a limited jurisdiction to hear appeals from decisions of magistrates' courts. The highest courts in a province are its superior courts which hear civil cases involving large sums of money and criminal cases

involving serious offences. Superior courts have trial and appeal levels. Appeal courts, with some exceptions, hear appeals from all the trial courts within the province and may also be called upon to give opinions respecting matters put to them, under a special reference procedure, by the respective provincial governments.

The Legal Profession

In common law jurisdictions in Canada practising lawyers are both called as barristers and admitted as solicitors. In Quebec the legal profession is divided into the separate branches of advocate and notary. In all cases, admission to practice is a provincial matter.

The Police

Responsibility for the administration of justice in the provinces is assigned by the BNA Act to the provinces; but police forces have been created by federal, provincial and municipal governments. Responsibility for providing general police services in areas of sufficient population density and real property assessment is in the hands of municipal police forces where they exist. Municipalities which have not created their own police force use either federal or provincial police forces.

Ontario and Quebec have created provincial forces which police areas of the province not served by municipal forces. The duties of the provincial police also include providing police and traffic control over provincial highways, assisting municipal police in the investigation of serious crimes and providing a central information service respecting such matters as fingerprints, criminal records, stolen and recovered property.

The Royal Canadian Mounted Police (RCMP) is a civil force maintained by the federal government. It was originally created in 1873, under the name North-West Mounted Police to deal with public order in what were then sparsely settled territories many parts of which have since become provinces. The RCMP is still the sole police force in the Yukon Territory and the Northwest Territories. Provinces that do not have their own police forces employ the RCMP to provide appropriate service within their borders.

The RCMP is also responsible for enforcing many federal statutes including those dealing with drug offences, smuggling, commercial fraud and immigration. In addition, it is responsible for internal security investigation, the protection of government property and the protection of important persons. The RCMP represents Canada at the International Criminal Police Organization (Interpol) which Canada joined in 1949. As at January 31, 1975, the force had a total strength of 16,738 including regular members, special constables, civilian members and Public Service employees.

Legal Aid

In recent years, most provincial governments have established publicly funded legal-aid programs to assist people of limited means in obtaining legal assistance in a number of civil and criminal matters either at no cost or at a modest cost, depending on their financial circumstances. These programs vary by province.

Some are set up by legislative enactment, while others exist and operate by way of informal agreements between the provincial government and the provincial law society. Some provide fairly comprehensive coverage in both civil and criminal matters, while others encompass only criminal offences. In some cases, federal funds are made available for the development or expansion of the programs. The purpose of all such programs is to ensure that people get adequate legal representation regardless of their financial circumstances.

Ministry of the Solicitor General

The Ministry of the Solicitor General was established by Parliament in 1966 and given responsibility for the Royal Canadian Mounted Police, the Canadian Penitentiary Service and the National Parole Board, agencies which formerly had been under the Department of Justice.

A prime aim of the reorganization was the co-ordination of national programs for policing, penitentiaries and parole within the Canadian criminal justice system. The ministry plays a vital role in the maintenance of law, order and the country's internal security, has responsibility for offenders sentenced to two years or more in federal penitentiaries and for all inmates released on national parole.

Canadian Penitentiary Service

The Canadian Penitentiary Service operates under the Penitentiary Act and is under the jurisdiction of the Solicitor General of Canada with headquarters in Ottawa. It is responsible for all federal penitentiaries and for the care and training of persons committed to those institutions. The Commissioner of Penitentiaries, under the direction of the Solicitor General, is responsible for control and management of the Service, and related matters.

In the year ended December 31, 1974, the federal penitentiary system controlled 51 institutions: 14 maximum, 13 medium and 24 minimum security institutions. Total inmate population was 8,610, of whom 1.5 per cent were female offenders; 41 per cent (including females) were in maximum security; 46 per cent in medium security and 13 per cent in minimum security institutions. New, smaller institutions are being designed to provide more rehabilitation facilities for inmates, with indoor and outdoor recreation. Plans to phase out old institutions are being worked out.

The National Parole Board

Parole is a means by which an inmate in a correctional institution in Canada, if he gives definite indication of his intention to reform, may be released to finish his sentence in the community. The purpose of parole is the protection of society through the rehabilitation of the inmate.

The National Parole Board is composed of 19 members, including a chairman and vice-chairman, who are appointed by Order in Council. The Board has its headquarters in Ottawa and regional boards in each of five geographic regions of Canada; regional offices are located at Vancouver, Saskatoon, Kingston, Montreal and Moncton.

Agriculture

The services provided by the Canada Department of Agriculture are many and varied. From legislation establishing a veterinary inspection service in 1869, the number of Acts of Parliament administered by the Department has risen to more than 30. Today, the Department's diversified activities include inspection and grading of farm products, research into the physical and economic problems of agriculture, safeguarding crops and livestock from disease and insect pests, and enforcement of laws governing sales of pesticides, feeds and fertilizers. The Department assists farmers through such measures as price stabilization, crop insurance and rural adjustment programs, and provides marketing services, including market reports and forecasts, and consumer-oriented food advisory services. Supervision of race-track betting is also a departmental responsibility.

The Department has seven branches: Economics, Health of Animals, Production and Marketing, Food Systems, Research, Financial and Administration, and Personnel Administration.

Special Agencies

The Canadian Grain Commission, which reports to the Deputy Minister of Agriculture, administers the Canada Grain Act. Its responsibilities include licensing of grain elevators, protein testing of wheat and supervision of the grading and handling of grain in Canada. The Canadian Dairy Commission and the Canadian Livestock Feed Board are responsible to the Minister of Agriculture. The Dairy Commission supports the market price of major processed dairy products and makes direct payments to producers of milk and cream used for manufacturing dairy products, to supplement producer returns from the market. The Feed Board ensures price stability and availability of feed grains to meet the needs of livestock farmers.

The Farm Credit Corporation, a Crown agency reporting to Parliament through the Minister of Agriculture, makes loans to individual farmers and to groups of farmers operating as syndicates. The National Farm Products Marketing Council, also responsible to the Minister of Agriculture, oversees the establishment and operation of national marketing agencies for various farm commodities.

Programs and Policies

To ensure that Canadian beef production continued at adequate levels, the Department instituted a one-year stabilization program, in August 1974, providing a support price of \$45.42 per hundredweight for Grade A, B and C steers and heifers. The program, providing a support price indexed to production costs, was subsequently continued beyond August 1975. Other measures to assist the industry included the purchase of canned beef for world food aid, and a temporary price stabilization plan (for the period November 16, 1974 to April 30, 1975) for slaughter cows to encourage farmers to cull their herds in an orderly manner.

A new federal feed grains policy, implemented in August 1974, is aimed at promoting a steady and balanced development of the livestock and feed grain



Beef cutting floor at a meat packing plant in St. Boniface, Man.

industry in Canada. Among other things, it provides for: a national market for feed grains; co-ordination of transportation and stocks to meet domestic and export requirements; special reserve stocks of feed grains to be held at designated points and a comprehensive information system for the domestic feed grain market. Three federal agencies are involved in administering the policy: the Canadian Livestock Feed Board, the Canadian Grain Commission and the Canadian Wheat Board.

The Department's plant breeders continue to keep the country's farmers well supplied with new crop varieties. Recent introductions include barley, oats, wheat, buckwheat, potato, clover and flax varieties.

The signing of agreements with the provinces of Ontario, Quebec and Saskatchewan will help to meet the need for more veterinarians. Under the agreements, the federal government shares with the province concerned the capital cost of expanding the teaching facilities at Canada's veterinary colleges: the Ontario Veterinary College of the University of Guelph; the University of Montreal's veterinary college at St-Hyacinthe; and the University of Saskatchewan's veterinary college at Saskatoon.

More than \$1.5 million in grants was paid out in 1974-75 to producer groups under the Department's Fruit and Vegetable Storage Construction Assistance Program. During the year, the program was amended to include assistance for major renovations to existing facilities.

Citizenship

The Citizenship Sector of the Department of the Secretary of State is concerned with strengthening Canadian unity and identity through group understanding and through increased participation by all citizens in their local and national communities. Its responsibilities encompass all aspects of citizenship from granting citizenship status to encouraging citizens to help identify and resolve the social issues that directly affect their lives.

The Citizenship Sector consists of a headquarters staff in Ottawa, and a network of regional offices and citizenship courts located in the major centres throughout the country.

The programs of the Citizenship Sector pursue the common goal of encouraging citizens to develop Canada's multicultural character, and to create a society which respects the rights and responds to the needs and aspirations of all its citizens. Technical advice, research and grants are therefore made available to citizens' organizations and unstructured social groups to enable them to pursue their activities and realize their goals.

Recent program activities include strong support to native citizens' associations and friendship centres in urban areas. The multicultural program supports ethnic preservation and inter-ethnic understanding by commissioning ethnic histories and by assisting groups to express themselves to the majority groups and impress upon them the cultural contribution of minority ethnic groups to Canadian society. Developmental work is also undertaken to make key institutions more aware of the multicultural character of the Canadian population.

The multi-faceted Citizens' Participation Program deals with a very broad spectrum of voluntary organizations, both established and recently created. Many organizations receive support for projects which encourage personal interaction among Canadians from different regions of the country, to enable them to develop a greater understanding of the cultural and geographic diversity of Canada and of its history and political institutions. There is also provision of support for programs and projects aimed at increasing inter-group understanding and the protection of the rights of all Canadians.

Citizenship Registration

Canada was the first country in the Commonwealth to adopt a distinctive and separate Citizenship Act. It came into force on January 1, 1947. Its purpose was to give a clear and simple definition of Canadian citizenship and to provide a common status for all the people of Canada that would help unite them as Canadians.

According to the Act, a Canadian citizen is a person who is either born in Canada or is naturalized in this country. A child born outside Canada to Canadian parents may become a Canadian citizen upon the registration of his birth with the Registrar of Canadian citizenship. All British subjects who, prior to January 1, 1947, had resided in Canada for a period of 20 years, or who had Canadian domicile, or women who had married Canadian citizens and had taken up residence in Canada, automatically acquired Canadian citizenship status at that time.



For many immigrants, Canada presents a very different way of life.

In general, a person wishing to become a Canadian citizen must be 21 years of age or older, have been admitted to Canada as a "landed immigrant" and have resided here for five years. He or she must be of good character, understand the responsibilities and privileges of citizenship, have an adequate knowledge of English or French and intend to live here permanently.

The granting of citizenship is the responsibility of Citizenship Registration, which includes the office of the Registrar of Canadian Citizenship, examination and administrative divisions in Ottawa and courts of Canadian citizenship located in major cities throughout the country. Some of these courts have sub-courts in nearby towns, and Toronto and Montreal have store-front offices where applications are taken. Facilities for obtaining citizenship elsewhere are provided by these courts operating on circuit, by the law courts, and in remote areas, by individuals designated for the purpose.

Consumer and Corporate Affairs

The Department of Consumer and Corporate Affairs was created in December 1967, and given the goal of fostering an efficient Canadian market system in the interest of every individual Canadian. The new Department brought together, under one Minister, most federal laws regulating business in the marketplace. Its existence reflects Parliament's belief that a competitive market is basic to an effective national economy and that it can be structured to benefit consumers, businessmen and investors equally.

Legislation and policies administered by the Department are designed to have a dual effect: to stimulate productivity among suppliers of market goods, and to promote fair economic treatment for all who take part in the market system. One result of the Department's activities has been a strengthening of the idea that consumers have rights and must be protected and that the widest possible audience must be provided with more information on consumer matters.

Four bureaus and the Field Operations Service share the responsibility for achieving these objectives.

The Bureau of Consumer Affairs develops legislative proposals and programs for consumers' protection and information in such areas as packaging, labelling, weights and measures, and hazardous products. The Bureau operates the Consumer, Box 99, Ottawa, a mailing centre for direct communication between the public and the federal government on matters of concern to consumers. Box 99 received over 40,000 complaints and inquiries in 1974. The Bureau also maintains consumer research programs and provides extensive information to consumers through its monthly newsletter, *Consumer Contact*, and other media.

The Bureau of Corporate Affairs concerns itself with much of the legal framework at the federal level that governs the orderly conduct of business. New businesses incorporated under federal law receive their federal charters of incorporation from the Bureau, which also presides over bankruptcy proceedings for insolvent companies and licenses trustees in bankruptcy.

The Textile Labelling Act requires dealers to apply—on a permanent label on most articles—the generic names of the fibres contained in order of importance and identify the dealer by name and postal address or identification number. The name and postal address of a particular company using an identification number may be obtained by writing to the Consumer, Box 99, Ottawa, K1N 8P9.

Care labelling is voluntary and gives care instructions in coloured symbols. Articles carrying these symbols are increasingly frequent, since they are preferred by consumers. There are five standard symbols, one each for washing, bleaching, drying, ironing and dry cleaning. The traffic light system is used to indicate the degree of caution—red means stop, amber means proceed with caution and green means go ahead.

Almost any household chemical product, bleach, floor polish or drain cleaner can be harmful if it is misused. Regulations under the Hazardous Products Act require labels to warn users of the possible hazards. Four symbols portray the major hazards; skull and crossbones (poison), flame (indicating a flammable substance), exploding grenade (explosive) and a skeleton hand (the danger of a corrosive substance).

Cleaning Instructions

Stop



Be careful



Go ahead



WASHING



Do not wash



Machine washable
in warm water



Machine washable in
lukewarm water



Hand washable
in lukewarm water



Machine washable
in hot water



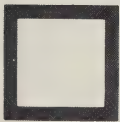
BLEACHING



Do not bleach



Use chlorine
bleach as directed



DRYING



Tumble dry medium-high

Tumble dry low.



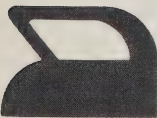
Dry flat



Hang to dry soaking-wet



Hang to dry



IRONING



Do not iron



Iron medium



Iron low



Iron high



DRY CLEANING



Do not dry clean



Dry clean low



Dry clean

Symbols for Hazardous Products

Danger			Explosive								
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The Bureau's Bankruptcy Branch has extended its program to benefit individuals who are so deeply in debt that they must declare personal bankruptcy. Liquidations are administered for a fee of \$50 compared to the \$500 or more charged by trustees in private practice. To qualify, a debtor must have debts exceeding \$500 and have annual income of \$6,500 or less for a married person, or \$4,000 or less for a single person.

The Bureau of Intellectual Property acts to encourage innovation and creativity and the sharing and use of knowledge and information in Canada. The Bureau grants exclusive rights for inventions (patents), trade marks, and industrial designs and copyright for original artistic, dramatic, literary or musical works. The owners of these rights can then sell or license them to someone else, if they do not intend to make use of them.

Patents are granted for new and useful inventions. They give the patent owner exclusive rights to use the invention for 17 years in Canada. In return, a full description of the invention is made public. Businesses use trade marks to distinguish their products or services from those of other businesses and to indicate their source or origin. Trade mark registration gives the owner exclusive rights to use the mark for specific products or services for renewable periods of 15 years. An industrial design is an original artistic design for the outward appearance of an article, such as its shape or pattern. The registration of an industrial design gives the owner exclusive rights for five years, with possible renewal for five additional years. An author or creator has exclusive rights to his/her original work automatically upon the work's creation. These rights last, in most cases, for the lifetime of the author plus 50 years. Registration of copyright gives the author recognized evidence of ownership.

The Bureau of Competition Policy administers the Combines Investigation Act, the legislation aimed at maintaining a competitive market system. The Director of Investigation and Research, who has the status of an assistant deputy minister, has authority under the Act to conduct inquiries where he has reason to believe there may have been a violation relating to agreements, mergers, monopolies, price discrimination, promotional allowances, misleading representation as to prices, false and misleading advertising and retail price maintenance. The results of these inquiries are then sent to the Restrictive Trade Practices Commission, or to the Attorney General of Canada for possible legal action. The Attorney General must decide whether charges should be laid following the report of the Commission.

The Field Operations Service administers a field force across Canada, operating from regional offices in Vancouver, Winnipeg, Toronto, Montreal, Halifax and from district offices in many other cities. It implements and enforces the legislation for which the Department is responsible and ensures that these laws are interpreted and applied uniformly throughout the country. Members of the force inspect food, hazardous products, electric and gas meters, verify weights and measures, and investigate false and misleading advertising. Patent, trade mark, industrial design and copyright applications can be filed at the five regional offices. New companies can be registered in the area where they are located, and specialists in bankruptcy are also located in the regions. At every regional office and at some district offices, a consumer consulting, information, complaints and inquiry service is provided.

Education

The beginnings of the post-industrial society are upon us. As Daniel Bell and others have suggested, the creation of a service economy and the pre-eminence of professional and technical occupations characterize the structure of a post-industrial society.¹ Thus the problem of producing the required professional and technical manpower is one that education must face.

A second major problem of modern-day education lies in the area of learning. If one stops to consider that children today, by the time they are leaving the elementary school, have accumulated in many ways more knowledge than the greatest philosophers of ancient times, then the problem is evident. The extremely high input of data and basic information in today's society has created a need for new methods of instruction. In trying to arrive at a solution, one is hampered by the fact that western society values individualism, which creates a demand for greater flexibility in teaching methods.

To solve these problems, an important step has been taken in Canada through the development of an array of educational structures at the tertiary level. Further steps include those at the elementary and secondary levels where programs are being structured around such innovations as non-graded systems, promotion by subject and the elimination of departmental examinations, with an emphasis on continuous evaluation. New teaching methods include the use of educational aids (closed circuit and educational television, tape recorders and overhead projectors) to facilitate and enrich the learning process of individual students.

At the same time, there has been a concomitant need for an increase in professionalization of the teaching staff at all educational levels. In part, this has resulted in shifting teacher-training programs to universities with an accompanying decrease in teachers' colleges in Canada.

Educational Jurisdictions

Under the British North America Act, Section 93, the provinces are generally responsible for education, except for federally-sponsored schools for Indian and Inuit (Eskimo) students, children of servicemen in Europe and inmates of federal penitentiaries. In addition the federal government helps finance tertiary education in the provinces, participates in informal education and makes grants-in-aid for research personnel and equipment.

Provincial autonomy has resulted in the development of distinctive educational systems in the various provinces. There are, however, certain similarities. Each province and territory has established a department of education headed by a minister who is a member of the Cabinet, and administered by a deputy minister who, as a public servant, advises the minister and administers legislation relating to education. Each department of education is engaged in supervising the quality of educational systems, certifying teachers, providing financial assistance to school boards and determining courses of study and lists of textbooks.

Changes in the original departments of education in some provinces have created

¹Daniel Bell. "Notes on the Post-Industrial Society," *The Public Interest* (Winter 1967, and Spring 1968).



School children sample maple sugar and syrup at a sugar bush near Chelsea, Que.

a second governmental department dealing exclusively with post-secondary education. Provinces with two departments concerned with education are Alberta, Manitoba, Ontario and Saskatchewan. In addition, Quebec has established two directorates within its department of education, one concerned with universities and the other with colleges.

Elementary and Secondary Education

School Administration. The provinces have delegated considerable responsibility for operating publicly controlled elementary and secondary schools to locally-elected or appointed school boards whose authority is determined by legislation. These boards are responsible for building and maintaining schools, hiring teachers and preparing a budget. With a decrease in the degree of centralization in most provinces, local authorities exercise greater control in setting year-end examinations in the final year or years of secondary school, and in determining the curriculum and textbooks to be studied.

A most important change in the last decade has been the restructuring of local educational administrations, entailing the creation of larger school districts operating larger schools. Enlarged administrative units ensure that all areas in the provinces have similar levels of education, and larger schools, more financially solvent, are in a better position to provide the necessary teaching and administrative personnel, and up-to-date educational equipment.

Following the recommendations made by the Royal Commission on Education and Youth in 1964, school districts have been consolidated in Newfoundland. The 300-odd "denominational" boards were reduced to 35 districts and in January 1971 there were 12 Roman Catholic school districts, 21 integrated Protestant boards and

one each for the Pentecostal and Seventh Day Adventist denominations. The trend in Prince Edward Island and Nova Scotia is also toward the consolidation of small educational units. New Brunswick has replaced its 422 school districts with 33 enlarged districts.

In Quebec, legislation enacted in 1961 created large units of administration for secondary school education. The number of elementary school boards was reduced from 1,100 to 250 by legislation passed in 1972.

As a result of legislation in the late 1960s, significant administrative reorganization occurred in Ontario. Thousands of small units, administered by three-member boards of trustees, were replaced by about 200 enlarged county boards of education integrating elementary and secondary school operations. Large cities have been exempted from this reorganization and are allowed to administer their own school systems. Most Roman Catholic school administrations have been integrated within these county boards, although separate schools have the option of whether or not to join.

In all four western provinces districts have been consolidated. In fact, Alberta and British Columbia were the precursors of this trend toward amalgamation in Canada. Since 1937, the school districts' authority in Alberta has to a large extent been assumed by enlarged school divisions (aggregations of designated school districts) and gradually counties are superseding divisional organizations. In the mid-1940s, British Columbia reduced the number of school districts from 650 to 74 large administrative districts. In the 1960s school administration in Manitoba was reorganized. In Saskatchewan, recommendations regarding implementation of consolidated school districts are being considered.

School Organization. Kindergarten classes are offered in all but two provinces, Prince Edward Island and New Brunswick. The other provinces provide this education to five-year-olds in the publicly controlled school system. However it should be noted that these services are predominantly found in the larger urban centres. Throughout Canada there are an increasing number of nursery schools and kindergartens that are privately operated for children from three to five years of age.

The traditional organization of elementary and secondary schools has been grades 1 to 8 in elementary and 9 to 12 in secondary. Modifications on this particular arrangement have come through the introduction of junior high schools. Junior highs have developed in all provinces except Newfoundland, Quebec and Saskatchewan, and generally include grades 7, 8 and 9, with senior high schools providing grades 10, 11 and 12 (13 in Ontario).

Most secondary schools offer technical and commercial subjects as options in the academic curriculum. Vocational, technical and commercial secondary schools, at one time located only in large cities, are now an integral part of the school system, province-wide in many provinces. An increasing number of composite schools offer optional programs in academic or technical subjects, such as agriculture, home economics and commerce, allowing more flexibility for individual interests and capabilities.

A key change in Canada in the last few years has been the increasing tendency toward non-graded or continuous progress school organizations, which allow students to advance at their own rate. Many provinces are in the process of developing innovative approaches in handling non-graded school systems.



Centimetres, kilograms and kilos are becoming familiar terms as Canadian students adjust to the metric system.

The Atlantic Provinces are accelerating the development of a school organization emphasizing promotion by subject rather than by grade, using a "credit" system. Nova Scotia has in addition introduced a program allowing secondary school students with high academic standing to carry one or more extra courses.

In Quebec, programs with graduated options and promotion by subject are increasingly emphasized.

Ontario is also proceeding with a "credit" system. In the secondary schools, implementation of this policy is leading to increasingly flexible individual program scheduling, optional diversified courses and promotion by subject.

The western provinces are also encouraging a less rigid classification by grade. In Saskatchewan the traditional 12 elementary-secondary grades have been replaced by four divisions, each consisting of three years of school for a student making normal progress. In Divisions I and II, the principle of non-grading with continuous evaluation and flexible promotion has been adopted. Division III programs have been designed to accommodate the special problems of the young adolescent. The newly developed programs stress more flexibility, which makes allowance for individual differences. Students are encouraged to discover facts and think for themselves; at the core of these divisions is the belief that students should develop values, skills and ideas or concepts rather than learn by rote.

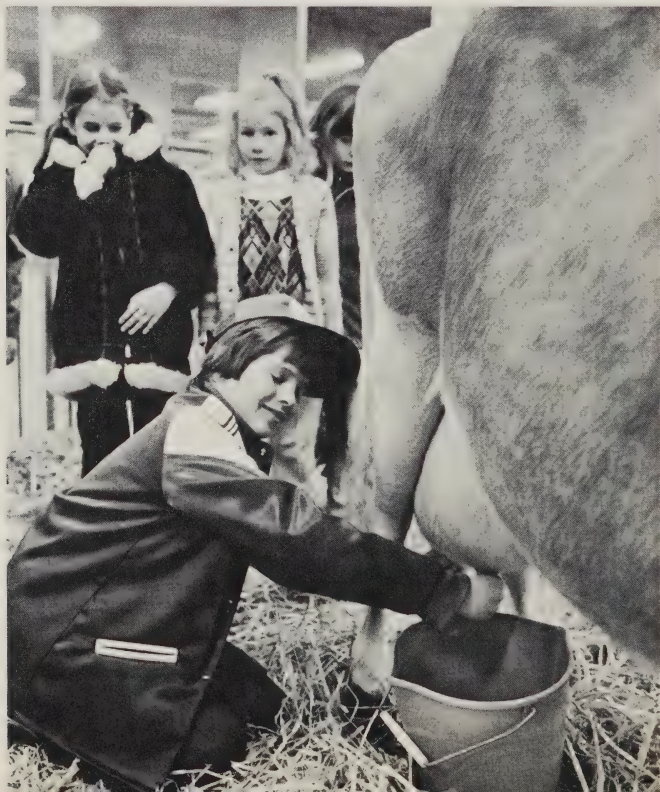
Since 1969, Nova Scotia has made provision for individuals with incomplete formal high school education to obtain secondary school accreditation by passing a series of tests prepared by the Commission of Accreditation of the American

Council on Education. Similarly, Alberta now allows adults who have upgraded their education through informal learning and adult education courses to obtain a secondary school diploma.

The trend toward giving French-language instruction in the elementary grades of publicly controlled schools has accelerated in many provinces. In addition, recent legislation in Ontario provides for French-speaking students to receive their entire elementary-secondary education in French. Similarly, in 1970 Manitoba passed legislation which allows schools to teach in French. This same legislation provides for the instruction of students in other languages at the elementary and secondary levels.

Education systems in the Northwest Territories and the Yukon Territory are primarily geared to fulfilling the needs of the local population, chiefly the Inuit (Eskimo), Indian and Métis living in isolated settlements. In the Northwest Territories, responsibility for education was moved from the federal Department of Indian Affairs and Northern Development to the new Territorial Department of Education. The official transfer occurred in the Mackenzie District in April 1969 and in the Franklin and Keewatin districts in April 1970. The Territorial Department of Education is continuing the progress made by the federal government in providing a far-flung, modern and solidly-based school system and it has rapidly

Elementary school children from Vancouver, BC visit a nearby farm.





A school bus stop cabin in Elsa, Yukon Territory.

begun constructing numerous new schools and developing new curricular materials relating to the cultural backgrounds of the students. By choice, the schools in the Northwest Territories follow the programs of Alberta and Manitoba.

The majority of schools in the Yukon Territory have always been classified as public and have been administered directly by the Yukon Department of Education in Whitehorse. The Yukon Territory has chosen to follow the British Columbia school curriculum although the program is adapted to incorporate material relevant to the heritage of the native peoples.

The fact that the Northwest Territories and Yukon Territory are facing the challenge of preparing their students to compete in contemporary Canadian society is clear as more children are enrolled in school and more children are staying in school longer and completing grade 12.

Enrolment. Enrolments of public, elementary and secondary students over the past two decades have increased fairly rapidly, a result of the high postwar birth rate in Canada. Public school enrolments at the elementary level began to decline in 1971-72 as a result of the lower birth rates in the mid 1960s. This decline can be expected to have an effect on secondary enrolment in future years.

Enrolment as a percentage of the population in the early 1950s was 18 per cent. By the early 1970s this had risen to approximately 26 per cent, again as a result of the high birth rates in the early 1960s, and of students staying in school longer. Between 1970-71 and 1971-72 this proportion dropped slightly in all provinces except Newfoundland and the Northwest Territories where it rose slightly; in Saskatchewan it remained constant. It is expected that this percentage will drop in the future, primarily as a result of the present declining birth rates, even though students will remain in the school system for longer periods.

Total enrolments between 1973-74 and 1974-75 in the public elementary and secondary school system declined from 5,484,684 to an estimated 5,410,200 or 1.4 per cent. Quebec experienced the greatest decline during this period: it decreased by 52,000 students, while Alberta increased its enrolments by 14,000 students by the introduction of a pre-elementary level. The decline is general throughout the elementary level and is spreading to the secondary.

The increase at the pre-elementary level was not because the population was greater but because more facilities were opening. Student enrolments at the elementary level declined 3.6 per cent from 1972-73 to 1973-74, while at the secondary level enrolments declined only 0.2 per cent. Between 1973-74 and 1974-75 enrolments continued to decline: 2.6 per cent at the elementary level and 0.1 at the secondary level.

The number of teachers in elementary and secondary schools decreased by 1.2 per cent from 1972-73 to 1973-74 but this decline should be erased by the increase in 1974-75.

Vocational and Technical Education

In the last decade there has been a rapid development of vocational and technical education in Canada. For the purposes of this presentation vocational education includes all training (the great majority of cases not requiring a complete high school education for entrance) for occupations requiring varying degrees of skill normally taking less than one year to acquire, and in the performance of which greater emphasis is placed on manipulative skills and pre-determined procedures rather than on the application of ideas and principles. Technical education prepares students for occupations that require high school graduation for entrance, and at least one year's training (and usually two to three). This schooling requires the application of ideas and principles in a semi-professional role.

Vocational training is available in publicly operated trade schools and similar institutions, in private trade schools and business colleges, in provincially registered apprenticeship programs, in publicly supported training-in-industry programs for employees and in on-the-job training programs introduced as a measure to offset unemployment. Institutions similar to public (provincially operated) trade schools include adult vocational centres, trade divisions of community colleges and schools for specific occupations such as nursing aid schools, forestry schools, and police and firefighters training establishments. Not included in this discussion are vocational and composite high schools. While in some provinces the courses offered in these secondary schools continue to provide training leading to employment, changing aims and school organizations have made the distinction between academic and vocational students less and less recognizable.

In instances where applicants do not have the required academic background to proceed with vocational training, there are upgrading courses to bring trainees to the required educational level. Many vocational centres also offer language training for those who do not have the proficiency in either English or French to receive instruction in a vocational course. Short "orientation" courses are also made available that guide trainees into the proper skill areas and help them brush up prerequisite skills.

Adult Continuing Education

There is a wide array of adult education in Canada today. Many institutions at the secondary and tertiary levels, including school boards, provincial and private schools, business and professional associations, community colleges and universities, offer a considerable variety of correspondence or extension courses, or both.



A Vancouver teacher from a school for the blind lifts a student to explore spring blossoms.

In addition to providing diversified programs, these institutions emphasize flexibility by providing part-time day or evening classes. As a consequence, hundreds of thousands of adults are now pursuing further academic, vocational and cultural education to obtain accreditation or follow individual interests.

Tertiary Education

The past decade has witnessed an extraordinary increase of enrolment in the tertiary level of education which has surpassed the elementary-secondary rate of growth during the same period. This educational level has two main sectors: the non-degree-granting institutions, encompassing community colleges and other related institutions, teachers' colleges and diploma schools of nursing; and degree-granting institutions, including universities and affiliated colleges. Over the decade the increase in enrolments was especially marked in the universities and community colleges, although at present there is a short fall in enrolment in the former.

Several factors contributed to this continuing significant growth. Some are the high birth rates in the postwar years which resulted in increases in enrolments at the elementary-secondary level and culminated in a rise in numbers at the tertiary

level, and higher retention rates in secondary schools. Other factors are the growing diversification of types of post-secondary institutions and programs that cater to individual interests and abilities, and the supposition that education beyond the secondary level is a path to increased social mobility.

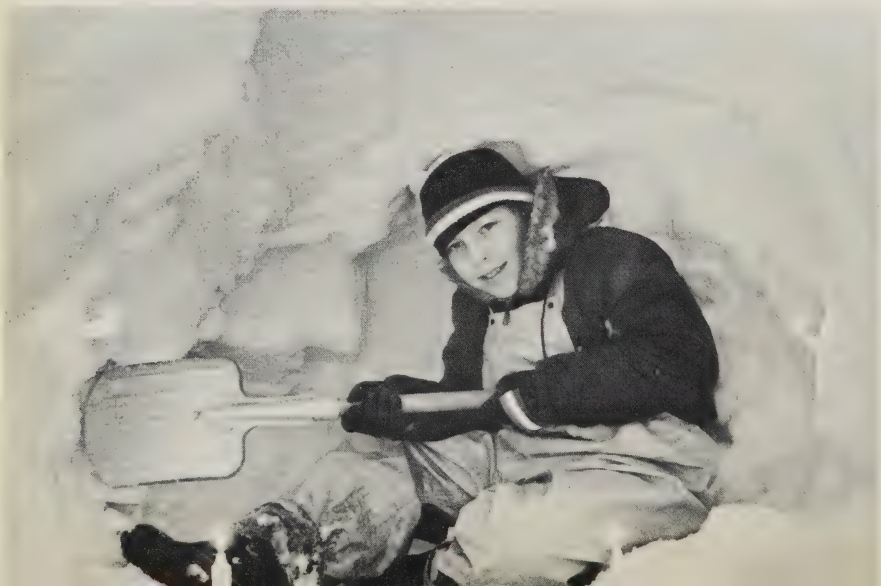
Community Colleges and Related Institutions

Community colleges have developed to meet the need for various types of programs and an increase in students seeking post-secondary education in other than the university sector. Enrolments in these institutions are rapidly increasing because of the community colleges' flexible open-door policies. Further, the need for semi-professional personnel in a system that is rapidly moving toward a service economy has recently stimulated increased enrolments. These institutions are discussed in the context of that need.

Included is the provision of the junior years of university-related colleges, from which graduates may apply for admission to the senior years of a degree-granting institution as well as for other credit and non-credit programs. Included in this classification are, specifically, regional colleges in British Columbia, public colleges in Alberta, a college of Applied Arts and Sciences in Saskatchewan, colleges of Applied Arts and Technology in Ontario, general and vocational colleges (CEGEP) in Quebec and, generally, colleges of agricultural technology, institutes of technology, technical institutes and schools of para-medical technologies.

Most colleges are provincially supported and exercise various degrees of autonomy. High school graduation is a prerequisite for entrance to post-secondary programs, but where this is lacking, many colleges provide a qualifying year. In addition, or alternatively, some institutions permit older applicants without the necessary qualifications to attend classes as "mature" students.

Spending the night in candle-lit snow caves on Mount Seymour, BC, school children completed a unique lesson in outdoor living.





Students mastering the culinary arts at the George Brown College of Applied Arts and Technology in Ontario.

Technical programs are of two or three years duration, very rarely four, and in three main divisions—applied arts, business and technical studies. Completion of two- or three-year programs leads to a Diploma of Technology (DT) or to a Diploma of Applied Arts (DAA). A certificate is usually given in recognition of the completion of one-year programs.

Provincial Systems of Community Colleges

In the Atlantic Provinces, community colleges include the College of Fisheries, Navigation, Marine Engineering and Electronics and the College of Trades and Technology in Newfoundland; Holland College in Prince Edward Island; an agricultural college, two institutes of technology, two marine institutes and a land survey institute in Nova Scotia; and two institutes of technology and a forest ranger school in New Brunswick. All these institutions stress vocational training geared to employment. The Nova Scotia Agricultural College has recently integrated the vocational and university equivalent programs into its curriculum, and a bilingual college was established to serve the Acadian population.

In Quebec, the *Collèges d'enseignement général et professionnel* (CEGEPs), offering three-year terminal technical studies and two-year academic programs (a prerequisite for entrance to university), were inaugurated in the mid-1960s following recommendations of the Royal Commission on Education. This new college system incorporated a variety of post-secondary institutions, including many normal schools, diploma schools of nursing, and institutes of technology. A few classical

colleges and public technical institutes and related institutions are still independent of the CEGEP structure. More than 30 CEGEPs are in operation, some being multi-campus institutions.

In Ontario, colleges of applied arts and technology (CAATs) were established in 20 regions in 1965. They are oriented to providing vocational and technical education. Other institutions in this educational sector include the Ontario College of Art, the Ryerson Polytechnical Institute, four colleges of agricultural technology and a school of horticulture. In 1973-74 there were 47,000 students enrolled in the CAATs and other related institutions.

Manitoba set up a community college structure in 1969, redesignating the Manitoba Institute of Technology and Applied Arts and two vocational centres as the Red River, Assiniboine and Keewatin Community Colleges, respectively.

Two of the three colleges in existence at present in Saskatchewan offer only vocational programs. One church-related institution, St. Peter's College, offers a one-year university equivalent program.

A recently established community college structure in Alberta, now under the jurisdiction of the Department of Advanced Education, incorporated the two institutes of technology, the three agricultural and vocational colleges and the five public colleges. These latter, offering both university and technical programs (with one exception), were previously called junior colleges. In addition, two private colleges offer one- or two-year university equivalent programs.

There are eight regional colleges (including Vancouver City College) in British Columbia that offer two-year terminal courses, or technical programs as well as university transfer programs. Included in the technical programs are those articulated with programs at the British Columbia Institute of Technology, where the second year is completed. In addition to these nine institutions, there are two private colleges offering university transfer programs; two colleges of art and the Vancouver Vocational Institute which offers programs classified as post-secondary by the province. The College of Art and Vancouver Vocational Institute are a part of the Vancouver City College.

Schools of Nursing

Nurses' training ranges from nurses' (RN) diploma programs—given traditionally in hospital schools but now more and more within regional schools of nursing and community colleges—to undergraduate and graduate degrees in nursing science offered in the universities. In addition, some universities permit individuals with a nursing diploma to qualify for a university nursing degree by taking one or two additional years of study.

Increasingly since 1964, when the Ryerson Institute of Technology included a nurses' (RN) diploma program in its course offerings, regional schools of nursing and community colleges have been providing nursing education. Provinces offering some nurses' diploma programs outside the hospitals include Prince Edward Island, Manitoba, Alberta and British Columbia. In Ontario, Quebec and Saskatchewan training programs are entirely outside hospitals. The course is being reduced from three years to two in many provinces.

In 1973-74 the total enrolment in nurses' (RN) diploma programs within hospital



School children learning to skate at Parson's Pond, Nfld.

schools, regional schools of nursing and community colleges was 22,949. This represents a decrease of 4.7 per cent from 1972-73.

Teacher Training

The trend during the past few years has been to phase out the teachers' college or normal school, which at one time was the principal post-secondary non-university institution. Previously, only teachers at the secondary level were required to have university degrees, but now candidates for both elementary and secondary teaching certificates are required to have a degree in all but two provinces, Nova Scotia and New Brunswick. Even in those two, teachers' colleges are being phased out and university professional training for teachers is being stressed.

University Education

Universities have a long history in Canada. Churches, provinces and interested groups of individuals have been instrumental in establishing them. The original universities and colleges included both French and English institutions. Today, over 60 universities exist in Canada that confer degrees. In addition, there are significant numbers of colleges affiliated with a university.

Universities and colleges at present differ with regard to language of instruction, size, number of faculties and so forth. The largest group of universities provide instruction in English, although there are a number of French degree-granting institutions. In addition, there are a few bilingual institutions including the University of Ottawa and Laurentian University in Sudbury, Ont. Institutions range in size and number of faculties from those with full-time enrolments of less than 1,000 students and one faculty to universities with more than 10,000 students with



Southern Alberta Institute of Technology in Calgary.

numerous faculties offering a comprehensive range of programs. In order to accommodate the tremendous increase in student enrolments in the past two decades, many universities were expanded considerably. In addition, several new universities were chartered — such as Simon Fraser, Brock, Lethbridge and Trent — and some institutions were given degree-granting status — for example, the University of Victoria and Notre Dame University of Nelson, BC.

Depending on the province, a student must have a junior or senior matriculation certificate in order to gain admission to courses leading to a first degree. Many universities now require or suggest in addition that students write specified aptitude tests. The length of programs varies from three to four years for a pass bachelor's degree to five years or longer for a professional degree in medicine, theology, architecture and law. The master's degree program following the bachelor's degree requires one or more years of study, and doctorates require a minimum of two years of study and intensive research after completion of the master's degree. The decrease in full-time enrolment in degree, diploma and certificate programs in universities experienced in 1972-73 did not repeat itself. 1973-74 figures show an increase of 3.4 per cent over the previous year. Noteworthy is the continued growth in the number of women enrolled in these programs, from 36.9 per cent of the total enrolment in 1972-73, to 39.3 per cent in 1973-74.

Financing

In 1971, 1972 and 1973, total expenditures on education were \$8,327,000,000, \$8,784,700,000 and \$9,622,000,000 respectively, representing increases of \$457,700,000 (or 5.5 per cent) and \$837,300,000 (or 9.5 per cent) over these time periods. Of these totals, expenditures by public school boards on the financing of elementary-secondary education across Canada were 53.6 per cent, 55.0 per cent, and 54.5 per cent in 1971, 1972 and 1973 respectively.

Federal government expenditure at the elementary-secondary school level for 1971, 1972 and 1973 was \$210,468,000; \$165,408,000; and \$186,125,000 respectively, representing 15.4, 11.0 and 11.0 per cent of the total federal government expenditure, not including transfer payments. The greatest amounts spent by the federal government are in the areas of university and vocational-occupational training. Under the terms of the Adult Occupational Training Act of 1967, the federal government pays the total costs incurred by the provinces to provide vocational training of adults in a training course arranged by a federal Manpower Office or in an apprenticeship training program. It also pays part of the capital expenditure required for provincial occupational training facilities. In 1971, 1972 and 1973 the expenditures by the federal government in this area were \$413,836,000, \$419,279,000 and \$450,000,000 respectively. In the same years federal government expenditure on universities was \$233,543,000, \$250,444,000 and \$264,635,000.

The contribution of the federal government to education in Canada is an important one. In 1971, 1972 and 1973 total expenditures, including transfer payments, were \$1,854,400,000, \$1,945,000,000 and \$2,087,900,000 respectively. This represents about 22 per cent of all monies spent on education in those years.

**Table 1. Expenditure of public elementary-secondary education for 1972¹ and 1973² calendar years
(thousand dollars)**

Province or territory		Local taxation	Provincial government	Federal government	Fees	Other	Total
Newfoundland	1972	915	78,235	252	1,826	2,261	83,489
	1973	1,005	89,896	436	1,940	2,373	95,650
Prince Edward Island	1972	2,500	16,579	—	—	40	19,119
	1973	—	22,813	—	—	50	22,863
Nova Scotia	1972	57,761	78,097	774	74	653	137,359
	1973	64,239	87,269	1,000	15	2,260	154,783
New Brunswick	1972	—	96,090	—	26	902	97,018
	1973	—	108,054	—	29	938	109,021
Quebec	1972	458,863	787,651	7,847	11,096	15,495	1,280,952
	1973	474,540	893,775	8,615	12,180	16,790	1,405,900
Ontario	1972	767,602	1,166,492	7,330	4,000	25,251	1,970,675
	1973	795,078	1,222,430	8,158	4,462	47,477	2,077,605
Manitoba	1972	88,028	104,690	755	1,211	1,014	195,698
	1973	89,836	125,520	905	1,512	1,607	219,380
Saskatchewan	1972	84,555	88,261	2,575	1,331	2,489	179,211
	1973	86,445	99,538	1,463	770	2,435	190,651
Alberta	1972	159,438	225,376	7,212	2,719	5,695	400,440
	1973	173,699	244,601	5,690	2,670	8,996	435,656
British Columbia	1972	161,341	258,089	5,335	80	13,449	438,294
	1973	178,691	301,664	6,110	92	15,403	501,960
Yukon Territory	1972	—	7,884	150	27	18	8,079
	1973	—	5,483	697	75	28	6,283
Northwest Territories	1972	715	22,137	171	—	—	23,023
	1973	794	24,586	190	—	—	25,570
Canada	1972	1,781,718	2,929,581	32,401	22,390	67,267	4,833,357
	1973	1,864,327	3,225,629	33,264	23,745	98,357	5,245,322

¹Revised figures.

²Preliminary.

Table 2. Statistical profile of public elementary-secondary education¹, 1973-74 and 1974-75

Province or territory		Enrolment ²				Special classes	Total	Teachers ³ total ⁴
		Pre- elementary	Elementary ⁴	Secondary ⁴				
Newfoundland	1973-74	12,289	83,578	58,944		5,020	159,831	6,855
	1974-75 ⁵	12,510	80,993	58,510		5,392	157,405	6,790
Prince Edward Island	1973-74	...	15,391	13,319		346	29,056	1,558
	1974-75	...	14,957	12,967		234	28,158	1,550
Nova Scotia	1973-74	14,370	100,850	89,306		3,125	207,651	10,080
	1974-75	14,307	97,085	89,756		3,132	204,280	9,990
New Brunswick	1973-74	—	87,170	80,932		2,077	170,179	7,841
	1974-75	—	84,677	80,878		995	166,550	7,790
Quebec	1973-74 ^P	91,692	673,141	630,133		69,633 ⁵	1,464,599	74,700
	1974-75 ⁵	87,300	645,500	609,300		70,500	1,412,600	72,800
Ontario	1973-74	162,067	891,805	922,313		32,425	2,008,610	90,519
	1974-75	170,441	885,564 ⁶	938,484		—	1,994,489	90,909
Manitoba	1973-74	15,427	109,705	103,681		5,807	234,620	11,897
	1974-75	15,983	106,334	102,607		4,628	229,552	11,772
Saskatchewan	1973-74	5,363	109,363	104,796		4,276	223,798	10,361
	1974-75	11,429	104,214	103,523		3,679	222,845	10,955
Alberta	1973-74	—	210,220	204,314		5,203	419,737	20,353
	1974-75	14,423	206,153	207,882		5,312	433,770	21,983
British Columbia	1973-74 ⁷	33,138	251,967	256,970		6,944	549,019	23,258
	1974-75 ^P	35,500	241,987	258,004		6,570	542,061	25,575
Yukon Territory	1973-74	—	2,863	2,080		14	4,957	270
	1974-75 ⁵	—	2,860	2,270		20	5,150	287
Northwest Territories	1973-74	1,267	8,155	3,068		137	12,627	650
	1974-75	1,210	8,520	3,470		140	13,340	682
Canada	1973-74	335,613	2,544,208	2,469,856		135,007	5,484,684	258,342
	1974-75	363,103	2,478,844	2,467,651		100,602	5,410,200	261,083

¹Includes separate schools.
²Excludes students in private elementary, secondary, kindergarten and nursery schools; students in schools operated by the Department of Indian and Northern Affairs; students in the Department of National Defence schools overseas; and in schools for the blind and deaf. In 1973-74 the enrolment in these schools was respectively, 158,110; 32,498; 4,566; and 3,624.

³Excludes teachers in schools specified in note ².

⁴Elementary is defined as grades 1 to 6 and secondary as grades 7 to 12/13 with the exception of Quebec with elementary grades 1 to 7 and secondary grades 8 to 12.

⁵Estimate.

⁶ Includes special education grades 1 to 8.

⁷June enrolment.

^pPreliminary.

... Not appropriate or not applicable.

— Nil or zero.

Table 3. Full-time enrolment in tertiary education, 1973-74¹ (preliminary data)

Province	Community colleges and related institutions ²		Teachers' colleges	Non-univ. sector		University sector	
	Technical programs ³	Univ. transfer prog.	Total	Diploma schools of nursing ⁴	Total	Univ. and affil. colleges	Males
Newfoundland	928	—	—	—	710	6,418	3,918
Prince Edward Island	676	—	—	—	184	1,409	763
Nova Scotia	1,072	167	511	759	624	16,362	9,508
New Brunswick	612	—	2	—	7,912	10,475	6,163
Quebec	39,590	59,946	161	793	7,380	68,308	39,431
Ontario	47,226	—	2	—	1,045	141,383	88,435
Manitoba	1,700 ⁵	—	—	—	817	16,919	10,250
Saskatchewan	1,658	48	—	—	1,912	13,533	8,253
Alberta	8,386	2,613	—	—	1,606	29,012	17,708
British Columbia	5,943	5,749	—	—	—	28,470	17,365
Canada	107,791	68,523	1,465	22,949	—	332,289	201,794

¹ Includes enrolments in the non-university sector (including post-secondary courses in community colleges and related institutions); teachers' colleges (outside the universities); and diploma schools of nursing; and in the university sector (including universities and affiliated colleges).

² Related institutions include a number of private colleges; The Nova Scotia Agricultural College, Ontario College of Art, etc.

³ Students in RN diploma programs have been excluded.

⁴ Includes students enrolled in diploma and regional schools of nursing and those enrolled in RN diploma programs in community colleges.

⁵ Trade-level students not included as they were in previous years.

— Nil or zero.

The Environment

The Department of the Environment came into being officially in June 1971 to amalgamate major federal responsibilities for the protection, preservation and enhancement of the quality of the environment and related renewable resources.

The principal objectives of the Department are: administering ongoing resource programs and services; abating air, water and land pollution and preventing new environmental hazards; assessing and controlling the environmental impact of major developments on federal lands or involving federal funds; initiating long-term environmental protection programs; promoting and supporting international environmental and resource-management initiatives; and developing informative and educational programs.

The Minister of the Environment, who is also the Minister of Fisheries for Canada, is assisted by a Minister of State (Fisheries) in carrying out responsibilities for fisheries and marine affairs.

Organization

The Department of the Environment has two principal components: Fisheries and Marine Service and Environmental Services, each headed by a senior Assistant Deputy Minister. The Planning and Finance Service provides policy and planning direction for the Department.

Responsibilities of the Fisheries and Marine Service include the management of Canada's ocean and inland fisheries in co-operation with the provinces; fisheries and oceanographic research contributing to the management, understanding and optimum use of renewable aquatic resources and marine waters; hydrographic surveying and charting of navigable coastal and inland waters; and research in support of international agreements relating to fisheries management and marine environmental quality. The Service is also responsible for the planning and administration of some 2,000 harbours for small craft and conducts environmental impact studies affecting coastal and inland waters.

Environmental services include the Atmospheric Environment Service (AES), the Environmental Protection Service (EPS) and the Environmental Management Service (EMS).

The Atmospheric Environment Service is concerned primarily with meteorology — the science of the atmosphere. The Service provides national weather and climatological services for the public and special users. Since 1958, it has been responsible for ice services in support of navigation in Canadian waterways, coastal waters and the Arctic archipelago. It is also actively engaged in meteorological research, applied meteorology and instrument design and development.

The Environmental Protection Service develops national environmental control guidelines, requirements and regulations in consultation with the provinces and industry. The Service carries out the assessment, surveillance, negotiations or enforcement necessary to obtain compliance with federal environmental legislation. It identifies and solves pollution problems, develops and demonstrates pollution control technology and serves as the focal point for all aspects of environmental protection for federal works, agencies and undertakings.



An element of the Vikoma system for containment and cleanup of marine oil spills is lowered into the water at Dartmouth, NS, during a demonstration by the Ministry of Transport.

The Environmental Management Service was established to co-ordinate activities related to terrestrial renewable resources, their use, and the impact of their use on the environment. It is composed of four directorates — Inland Waters, Forestry, Wildlife and Lands — responsible for providing data on the quantity and quality of resources, conducting research on the methods and techniques of conservation, and planning the comprehensive utilization of renewable resources throughout the country as provided for in federal legislation. The Service, because of its broad interests, plays a significant role in the consideration of the environmental effects of development projects by participating in the Environmental Assessment and Review Process which now applies to all federally sponsored projects.

The Planning and Finance Service provides an over-all framework of policy and planning advice, and co-ordinates the government's relationships respecting environmental and resource matters with the provinces and other countries. It develops and co-ordinates a comprehensive approach to departmental science policy and research activities, and supports the over-all departmental program by assisting in the acquisition and deployment of resources required to meet departmental objectives.

Advisory Bodies

The Canadian Environmental Advisory Council was set up to provide advice to the Minister in four general areas: the state of the environment and threats to it; the priorities for federal or joint federal-provincial government action; the effectiveness of the Department's efforts to restore, preserve or enhance the quality of the environment; and other matters which the Minister may refer to it as the need arises.



Bodies of old cars are ground up to small chips of metal and melted for recycling.

The Canadian Forestry Advisory Council and the Canadian Fisheries Advisory Council were established to report to the Minister on specific areas of responsibility relative to our renewable resources. These advisory bodies review programs, assess their impact and provide links with organizations outside the government. The Councils' members include prominent Canadians from industry, the universities and the scientific community as well as the Department of the Environment.

The Environmental Assessment Panel manages, on behalf of the Minister, the preparation and review of formal, detailed, environmental assessments and protection statements. It defines requirements for baseline environmental studies for areas in which proposed actions are contemplated. It also provides advice and guidelines to proponents undertaking environmental assessments, and assists the proponents in the incorporation of environmental designs and procedures to implement its findings.

Although the Department cannot accomplish on its own all of the renewable resource and environmental tasks owing to a division of federal and provincial jurisdictions, it can accomplish some, influence others and provide leadership.

Decision-makers everywhere need adequate knowledge and information in order to protect the environment and develop resource needs in harmony with it. There are many sources of information on the environment. The Department must identify knowledge gaps and seek to have these gaps filled in the most appropriate way and by the most appropriate agency. The key elements in this role are collecting data, taking surveys and inventories, making assessments, conducting research, monitoring, analyzing and predicting, together with providing advisory and consultative services, and exchanging information with other countries. For example, the Atmospheric Environment Service in its provision of meteorological information and advisory services to the Canadian public, government departments, industry, and so on, has developed effective mechanisms for the gathering, storage, retrieval, dissemination and international exchange of information on atmospheric conditions. This requires the use of complex computer systems.

Another activity is that of drafting requirements for maintaining and enhancing

the quality and productivity of the environment under specific conditions. Guidelines are required for environmental impact assessments, environmental design, environmental quality objectives, codes and zones, quotas and other restrictions on the harvesting of fish and wildlife, for example.

The Department of the Environment also advises international and inter-governmental negotiators on environmental matters or, in some circumstances, acts as a negotiator, through working relations with External Affairs, the Privy Council Office and others. The Department co-operates with the provinces in providing information that is basic to effective management of air, water, land, forest and wildlife resources. In all of these resources there is extensive provincial jurisdiction with significant transboundary effects. The Department also implements plans of joint concern to the provinces and territories, and acts as an enforcement agency when required to implement regulations. For example, in cases where provinces have the responsibility of enforcing standards, such as those for controlling effluents and emissions, the Department looks to them to take the lead for both governments. The Department will also offer supporting services in such areas as monitoring and surveillance. But the federal government must act directly, where it has jurisdiction, if the provinces are unable to provide adequate protection, or fail to do so.

The Department must be able to determine whether projects or products are well designed from an environmental point of view. Since April 1, 1974, federal activities have been screened in the early planning stages to make sure that they do the least possible damage to the environment. In future, all federal departments, agencies and firms under federal jurisdiction will prepare statements on the impact of their plans on the environment. These will be reviewed by the Environmental Assessment Panel or by outside review boards that can evoke changes in a project before large financial commitments are made or construction begins.

Bottom loading of gasoline minimizes the release of vapours.



External Relations

The Department of External Affairs

Established in 1909, the Department of External Affairs has three main purposes: to provide information and advice to the government on foreign policy issues and co-ordinate implementation of the government's foreign policy decisions; to foster understanding of Canada and its people by other governments and nations; and to provide assistance to Canadians travelling abroad.

In January 1975, Canada had diplomatic, consular and/or trade representation in 137 countries.

(Asterisks denote non-resident representation and the country in parentheses is that in which the Canadian representative resides.)

*Afghanistan (Pakistan)	Germany, Federal Republic of	*Mongolia (USSR)
Algeria	Ghana	Morocco
Argentina	Greece	*Nepal (India)
Australia	*Grenada (Barbados)	Netherlands
Austria	Guatemala	New Zealand
*Bahamas (Jamaica)	*Guinea (Senegal)	*Nicaragua (Costa Rica)
Bangladesh	Guyana	*Niger (Ivory Coast)
Barbados	Haiti	Nigeria
Belgium	Holy See	Norway
*Belize (Jamaica)	*Honduras (Costa Rica)	*Oman (Iran)
*Bolivia (Peru)	Hong Kong	Pakistan
*Botswana (South Africa)	Hungary	*Panama (Costa Rica)
Brazil	*Iceland (Norway)	*Paraguay (Argentina)
Britain	India	Peru
*Bulgaria (Yugoslavia)	Indonesia	Philippines
*Burma (Malaysia)	Iran	Poland
*Burundi (Republic of Zaïre)	*Iraq (Lebanon)	Portugal
Cameroon	Ireland	*Qatar (Iran)
*Central African Republic (Cameroon)	Israel	*Romania (Yugoslavia)
*Chad (Cameroon)	Italy	*Rwanda (Republic of Zaïre)
Chile	Ivory Coast	*San Marino (Italy)
China, People's Republic of	Jamaica	Saudi Arabia
Colombia	Japan	Senegal
*Congo, People's Republic of (Republic of Zaïre)	*Jordan (Lebanon)	*Sierra Leone (Nigeria)
Costa Rica	Kenya	Singapore
Cuba	Korea	*Somali Republic (Tanzania)
*Cyprus (Israel)	*Kuwait (Iran)	South Africa
Czechoslovakia	*Laos (Thailand)	Spain
*Dahomey (Ghana)	Lebanon	Sri Lanka
Denmark	*Lesotho (South Africa)	*Sudan (Arab Republic of Egypt)
*Dominican Republic (Venezuela)	*Liberia (Ivory Coast)	*Swaziland (South Africa)
*Ecuador (Colombia)	*Libya (Egypt)	Sweden
Egypt, Arab Republic of	*Luxembourg (Belgium)	Switzerland
*El Salvador (Costa Rica)	*Macao (Hong Kong)	*Syrian Arab Republic (Lebanon)
Ethiopia	*Madagascar (Ethiopia)	Tanzania, United Republic of
*Fiji (Australia)	*Malawi (Zambia)	Thailand
Finland	Malaysia	*Togo (Ghana)
France	*Mali (Senegal)	*Tonga (New Zealand)
*Gabon (Cameroon)	*Malta (Italy)	Trinidad and Tobago
*Gambia (Senegal)	*Mauritania (Senegal)	Tunisia
	*Mauritius (Tanzania)	Turkey
	Mexico	
	*Monaco (France)	

*Uganda (Kenya)
 Union of Soviet Socialist
 Republics
 United States of America
 *Upper Volta (Ivory Coast)
 *Uruguay (Argentina)

Venezuela
 *Vietnam, Democratic
 Republic of (People's
 Republic of China)
 Vietnam, Republic of
 *West Indies, Associated

States (Trinidad)
 *Western Samoa
 (New Zealand)
 Yugoslavia
 Zaire, Republic of
 Zambia, United Republic of

Canada maintains permanent missions to a number of international organizations, including the United Nations in New York and Geneva, the North Atlantic Council and the European Communities in Brussels, the Organization for Economic Co-operation and Development and the United Nations Educational, Scientific and Cultural Organization in Paris, and the Organization of American States in Washington.

Role of Foreign Policy

A striking feature of the postwar period is the increasing interdependence of events and nations. In the world arena, Canada, like other states, must act according to its perceptions, aims and interests.

Much of Canada's international effort is directed toward shaping events, developments and relations in a manner most favourable to Canadian interests and values. Canadians have a variety of collective concerns such as world peace, economic growth, independence of Canada, social justice and harmonious natural environment. The character of Canadian foreign policy at any time is determined by the emphasis given to various national aims.

Foreign policy is also shaped by the constraints and opportunities presented by the situations prevailing at home and abroad. When Canada's interests have to be pursued in competition or even in conflict with those of other nations, Canadian representatives must strive for the best attainable conditions for the achievement of Canadian objectives.

Foreign policy is the product of the definition and pursuit of national aims and interests in the international environment. Consider the international activities the government must undertake to achieve one of Canada's national aims—sustained and balanced economic growth. The government promotes exports to enlarge and diversify Canadian markets. Canada participates in efforts to expand world trade through commercial, tariff and financial agreements undertaken by institutions such as the International Monetary Fund, the General Agreement on Tariffs and Trade and the Organization for Economic Co-operation and Development. Information and cultural programs are essential to making Canada better known and respected abroad as a valid trading partner and supplier of high-quality products, and as an attractive place for investors, traders, tourists and qualified immigrants.

Canada and the United States

Of all Canada's international relationships the most intense and complex is that with the US. Canadians and Americans are constantly involved in exchanges at all levels — as tourists, businessmen, artists, officials and students — and at the

intergovernmental level. The extent of these exchanges is shown by the fact that there were 35 million visits by American residents to Canada in 1974 and 30 million by residents of Canada to the US. In the course of such a varied and complex interchange, friction can and does occur from time to time. However, the basic character of the relationship between the two peoples and governments remains friendly and constant efforts are made to achieve greater mutual understanding and co-operation.

Both Canada and the US have recently had to adjust to changed circumstances in the international environment. As both countries have developed policies in response to new conditions, the process of adjustment has made itself felt in their relations. Considering the international energy crisis, energy has become a significant bilateral issue. Canada has maintained an export charge on crude oil to ensure that its oil is sold at fair world-market value in the US. To protect domestic supplies, Canada has announced a gradual phasing-out of crude oil exports over the period leading up to 1982. In addition, the export price of Canadian natural gas has been raised to reflect its commodity value. Other important bilateral issues have been the imposition by both governments of import quotas on certain agricultural commodities in 1974 and a number of trans-border environmental concerns.

While the two governments conduct most of their everyday business through official channels, they have established, over the years, a number of permanent bilateral organizations, such as the International Joint Commission. The IJC has come to be the focus of joint endeavours to deal with pollution and problems of the environment along the Canada-US border. There are similar permanent organizations in other such areas as defence co-operation (the Permanent Joint Board on Defence).

Canada co-operates with the US in the joint defence of North America through the North Atlantic Treaty Organization (NATO) regional command system and the North American Air Defence Command (NORAD). Canada considers this co-operation to be vital to its sovereignty and security.

Search for New Directions in Canada's Relations with the United States. Canadians have become keenly aware of the magnitude of their country's economic relations with the United States. Each country is the other's principal supplier and best customer. In 1974, the United States provided the market for 66 per cent of Canada's exports and supplied 67 per cent of its imports. There is a great interdependence in the industrial and financial fields.

The world trend is discernibly in the direction of interdependence — in the economic realm, in science and in technology. For Canada, inevitably, interdependence is likely to mean an increasingly complex relationship with the US. The balance of benefits of such a trend for Canada may well be substantial. But a major consideration in interdependence with a large, powerful country like the US is the effect on Canada's separate identity. These considerations prompted a review of Canada's relations with the US. It appeared that the choices open could be classified in three broad categories: Canada could seek to maintain more or less the same relations with the US, with a minimum of policy adjustment; it could move deliberately toward closer integration with the US; or it could pursue a comprehensive, long-term strategy to develop and strengthen the Canadian economy and other



Ottawa, Canada's Capital, with the prominent External Affairs building in centre foreground.

aspects of national life and, in the process, reduce the present Canadian vulnerability to political and economic events in the US.

The “third option” was adopted. It was decided that a basic aim of Canada’s long-term foreign policy would be to lessen the vulnerability of the Canadian economy to external factors—including, in particular, the impact of the US—and, in the process, to strengthen Canada’s capacity to advance its basic goals and develop a more confident sense of national identity.

This policy does not entail protectionism or isolationism. On the contrary, it really means a greater involvement for Canada in the rest of the world. The effort to diversify relations means that Canadians seek not to supplant but to supplement their relations with the US. It is obvious that relations with the US will remain the most important. Canada’s purpose is to strengthen its world position in order to create a better-balanced, more reciprocal and thus healthier relationship between two independent partners.

Implementation of the “third option” policy requires application of a broad range of policy instruments in a number of sectors. Domestically, the co-operation of government, business and labour is essential to an industrial strategy for creating a sounder, less-vulnerable economic basis for competing in the domestic and world markets. Another requirement is the continued application of measures to promote Canada’s separate cultural identity. In the international realm, implementing the “third option” involves a conscious effort to broaden the spectrum of markets to which Canadians have access and to diversify their cultural relations by building

on the multiplicity of their cultural roots. The two most important targets of Canada's diversification effort are Europe and Japan.

New Directions—Europe

When the European Community was enlarged to include Britain as well as Ireland and Denmark, it became Canada's most important trading partner and market after the US. In 1974, the nine members of the Community received 13.1 per cent of Canada's exports and supplied 9.6 per cent of its imports.

Europe presents obvious opportunities for Canada in the search for alternative markets to the US. However, the Community, like every other major trading entity, controls access by applying commercial policy instruments such as tariffs and quotas; a common external commercial policy is followed by all nine member countries. Diversifying the composition and increasing the volume of Canada's exports to this market require continuing effort by Canadian industry to improve the competitiveness of its products and by the Canadian government to secure better terms of access for these products.

Canada's day-to-day relations with the Community are conducted by a diplomatic mission, headed by an ambassador, established in Brussels for this exclusive purpose. Canadian officials of the mission consult regularly with Community officials about trade-policy matters of common concern. In 1974, Canada took the first step to negotiate a contractual relation with the Community to support existing arrangements for consultation while creating new opportunities for expanding the scope of economic co-operation.

Canada's efforts to develop relations with the Community as a distinct entity have been paralleled by efforts to strengthen bilateral relations with the Community's individual members and with non-member countries. Canada's relations with Europe are strongly conditioned by the origins of its people, manifested in a cultural heritage derived from Britain and France and reflecting ties with other European countries to which many Canadians trace their ancestry.

Another important objective of Canadian foreign policy is to work toward peace with security. The purpose of NATO is to reduce the likelihood of a general conflict originating in Europe by maintaining a deterrent to conventional as well as nuclear attack. NATO is the best forum available to Canada for consultation and joint action with the 13 European member states, not only in the military and political fields but also in the economic, social, scientific and environmental spheres.

Canada has also strengthened international peace and security by working with its European partners toward the goal of *détente*. Canada has participated in the long and complex negotiations that began in Vienna in October 1973 between members of NATO and the Warsaw Pact aimed at mutual and balanced force reductions in Central Europe. Canada has also taken part in the Conference on Security and Co-operation in Europe, which opened in Helsinki in July 1973. The goal of these negotiations was the adoption of a series of documents intended to serve as a basis for improved East-West co-operation.

Canada's bilateral relations with Eastern Europe give practical expression to its support for *détente*. Canada works to maintain and expand relations with Eastern Europe on the basis of mutual benefit. In addition to improving political contacts,



Calling at ports around the world in 1975-76, this Newfoundland fishing schooner carries an exhibit emphasizing Canada's concern for marine environment and protection of the fish harvest.

Canada seeks further development of trade, economic, scientific, cultural and sports relations with Eastern Europe through exchanges at all levels.

New Directions—Asia and the Pacific

With the development of modern transportation and communications, Canadians have become increasingly aware of their position as a Pacific as well as an Atlantic nation. The countries of Asia and the Western Pacific represent a wide variety of forms of government, social structures, peoples and customs. They include some of the most highly-industrialized and wealthiest countries of the world and some of the poorest and least-developed. Canada has established a valuable trading relation with the former group and has played a major role in assisting the latter.

Japan is very important to Canada's efforts to diversify its external relations. Canada's third most important trading partner, Japan, received 7.1 per cent of its exports and was the source of 4.5 per cent of its imports in 1974. During 1974, efforts continued to increase the manufactured and upgraded content of Canadian exports to Japan. The relation between Canada and Japan is much broader than a trading one. When the Japanese Prime Minister visited Canada in September 1974, it was agreed that the two countries should make constant efforts to expand co-operation in the political, economic, cultural, scientific, technological and other fields. To improve communications, it was announced that matching and complementary programs for the development of Japanese studies in Canada and Canadian studies in Japan would be initiated.

Canada's friendly relations with Australia and New Zealand are no longer based

solely on traditional ties but also on co-operation in the solving of common problems. Canada and Australia, for example, share constraints and opportunities arising from widely-dispersed populations, vast natural resources, federal systems of government, and similarities in approach to foreign affairs.

The Sino-Canadian relationship as a whole reflects Canada's belief that the co-operation and participation of the People's Republic of China are essential to peace and stability in the Asian and Pacific region and in the world at large. Exchanges with China in the fields of industry, science, culture, education and sports continue to expand and Sino-Canadian trade has increased and diversified.

India, Bangladesh and Sri Lanka, and to a lesser extent Pakistan, were among the countries of the world most affected by increased energy-import costs, food shortages and inflation during the first half of this decade. The new international situation, coupled with a succession of natural disasters, disrupted economic development plans and forced these countries to seek greatly-increased international assistance in order to feed their populations. Canada responded with considerable increased aid in the form of food and fertilizer, and in technical assistance for the development of agriculture. Canada continues to participate in the Colombo Plan and in the Asian Development Bank and has official observer status with the UN Economic Commission for Asia and the Pacific.

Relations with the Commonwealth Caribbean

The present relations between Canada and the Commonwealth Caribbean have evolved from their historical ties. Common association in the Commonwealth has contributed to mutual understanding through shared traditions, institutions and values. Trading relations have been close over several centuries, and have been supplemented by considerable Canadian commercial interests and investment in the area. In recent years, communication has increased through the large movement of tourists, students, businessmen and immigrants between the West Indies and Canada. The region was Canada's third-largest source of immigration in 1974.

As in many developing countries, the governments of the Commonwealth Caribbean pursue policies designed to safeguard national control over their economies and to ensure that a satisfactory proportion of the earnings of foreign investment remain within their borders, available to finance further development. In implementing their investment policies, the Commonwealth Caribbean governments consult with the Canadian authorities in the spirit of the longstanding mutual ties and differences are settled amicably.

The Commonwealth Caribbean receives the highest per capita disbursements in Canada's aid program. Aid has been concentrated in social and industrial infrastructure in the sectors of agriculture, air transport, water supply, education and development planning. Funds have also been made available multilaterally through various organizations, including the Caribbean Development Bank and the UN Development Program.

Canada and the Middle East

Canada is giving increased attention to its relations with the Middle East, and has recently expanded its diplomatic representation there. Canada's major concerns in

the region are to achieve a just and lasting peace to end the Arab-Israeli conflict and the development of Canadian relations with countries in the region, in particular commercial relations.

Canada has consistently attempted to follow a policy of balance and objectivity in relation to the Arab-Israeli dispute. It holds the view that UN Security Council Resolution 242 of November 1967 offers a valid and available framework upon which to base the negotiations required to achieve a settlement of the dispute. Since settlement must take into account legitimate concerns, Canada supports the right of the people involved to be heard and to participate in negotiations affecting their future. Over the years, Canada has supported the efforts of the UN Relief and Works Agency to alleviate the plight of Palestine refugees. Canada has also contributed to the maintenance of the cease-fire that followed the war of October 1973, by providing a contingent of 1,100 troops to serve with UN peacekeeping/observer forces.

Many of the major oil-exporting countries of the Middle East have been using increased revenues in expanding their developmental projects. Some have sought to employ a part of their surpluses in assisting other countries that lack such valuable resources. These countries are becoming more aware of Canada's potential as a supplier of many goods and services they require. In 1974 Canadian exports to the Middle East increased by some 50 per cent. The value of Canada's imports from this region rose by about 250 per cent, owing mainly to the increase in the price of oil.

Some African women in the Thaba Tseka region travel two days to reach the only general store in the area. CIDA is providing assistance in this remote area in Lesotho, southern Africa, by undertaking an \$11 million development project.



Canada and Africa

Canada's relations with Africa continue to develop. Originally Canada's concern stemmed from common membership in the UN, the Commonwealth and the French-speaking community. In recent years, however, more emphasis has been placed on bilateral relations with African countries while maintaining and strengthening the multilateral bodies that have served so well in the past. Bilateral relations have been strengthened by social and technical co-operation (particularly in development aid) by economic and commercial ties and by the common search for social justice. The establishment of meaningful cultural, academic and scientific relations with the African countries has only recently begun.

A main concern of Canadian policy in Africa is to further the cause of social justice in southern Africa. In this context, Canada has welcomed the decolonization policies of Portugal in Angola and Mozambique. Canada has also followed closely events in Rhodesia and South Africa and has had numerous exchanges of views with African countries regarding these and related matters. One manifestation of Canadian concern was the implementation of a new policy of expanded humanitarian (educational, medical and agricultural) assistance to the indigenous peoples of that area, by which the Canadian government would contribute matching grants to reputable Canadian non-governmental or international bodies that already had existing projects of this type in southern Africa.

Canada and Latin America

Thanks to a diversified resource base, Latin America fared better than other regions in the first impact of the energy crisis and maintained a favourable rate of economic growth. Favoured by the economic climate, Canadian exports to Latin America for 1974 reached almost twice the value for 1973; the region received 4.2 per cent of Canada's exports. Imports from Latin America in 1974 more than doubled in value from the 1973 figures, and included oil from Venezuela, Canada's most important foreign supplier of energy resources.

Exchanges between Canada and Latin America have been increasing and diversifying. Canada is associated with the Inter-American System through a permanent observer mission to the Organization of American States and membership in its main developmental agencies and other bodies, including the Inter-American Development Bank, the Pan-American Health Organization and the Inter-American Institute for Agricultural Sciences. Canada is also a member of the UN Economic Commission for Latin America.

Canada's bilateral program of technical assistance to Latin American countries has concentrated on renewable natural resources, rural community development, public administration and education. Special relief has been extended in the aftermath of natural disasters. Development assistance has also been provided through such multilateral bodies as the World Bank and the Inter-American Development Bank.

Multilateral Diplomacy

The preceding section has focused on Canada's bilateral relations — relations with individual countries. Achieving Canada's national aims also requires mul-

tilateral activities—that is, participation in organizations and conferences in which many or most of the other countries of the world are represented and that have as their goal the solution of particular problems.

Multilateral diplomacy is particularly important to the achievement of Canada's aim of developing and strengthening the Canadian economy, as there are several international forums dealing with international economic issues. Canada is actively participating in the "Tokyo Round" of multilateral trade negotiations—the most comprehensive yet undertaken—covering tariffs, non-tariff barriers and other measures that impede or distort international trade in industrial and agricultural products. Canada has played an influential role in the negotiations on international monetary reform conducted under the aegis of the International Monetary Fund. It is a founding member of the International Energy Agency established under the auspices of the Organization for Economic Co-operation and Development. Canada works through the International Atomic Energy Agency to foster the application of nuclear power to peaceful pursuits.

Three international organizations are of special interest to Canada—the UN, the Commonwealth and the French-speaking Community.

Canada and the United Nations

Canada has worked diligently to make the UN an effective instrument for international co-operation and to improve its capacity to discharge its Charter responsibilities. The activities of the organization touch on almost every aspect of Canada's foreign policy aims. During the comprehensive foreign policy review of 1970, 11 goals were selected for Canada to pursue through its participation in the UN. These goals, which were chosen because of their intrinsic importance and because they were relevant to Canada's resources and capabilities, remain relevant today. The goals are: contributing to social and economic development; helping to stop the arms race; promoting peacekeeping and peacemaking through the UN; reconciling Canada's divergent objectives in southern Africa, where, for example, Canadian pursuit of domestic economic growth through export expansion might conflict with efforts to promote social justice; taking measures to prevent further deterioration in the human environment; promoting international co-operation in the peaceful uses of satellite systems; promoting international co-operation in the use of the seabed beyond the limits of national jurisdiction; promoting observance of human rights, including adherence to and respect for various UN conventions; contributing to the progressive development and codification of international law; projecting Canada as a bilingual country within the UN context; and contributing to the institutional development of the UN as a centre for harmonizing the actions of nations.

Economic questions have attracted increased attention at the UN in recent years. The developing countries make up more than two thirds of the UN membership and they exhibit considerable solidarity in UN forums to promote a new world economic order more favourable to them. Canada believes that the consensus of all interested parties, both industrialized and developing, is an increasingly essential condition for the effective implementation of UN resolutions on economic matters. Consistent

with the goals outlined above, Canada views positively attempts within the UN system to meet the challenges of world economic and social development, at the same time realizing that there exist, and will continue to exist, practical restraints upon the extent to which progress can be made in the short and medium term.

Canada participates wholeheartedly in multilateral efforts to prevent the proliferation of nuclear weapons. Canada has participated in all major UN peacekeeping operations, and at mid-1975 military personnel were serving the UN in this role in the Middle East, Cyprus and Kashmir. Canada will consider requests to participate in such ventures when they hold the promise of contributing to peace and stability.

A number of conferences organized under UN auspices have dealt with matters of special importance to Canada. At the Law of the Sea Conferences there have been lengthy and arduous negotiations to draw up a comprehensive and viable treaty on the law of the sea. The World Food Conference in Rome in 1974 established a World Food Council to develop a strategy for the more efficient utilization of food resources. In 1976, Canada is to play host to "Habitat"—the UN Conference on Human Settlements. The goal of the conference, to be held in Vancouver, is to assist both developed and developing countries to find solutions to their collective and individual problems in human settlements.

Canada participates in all of the Specialized Agencies of the UN, one of which, the International Civil Aviation Organization, is located in Montreal. Canada contributes the ninth-largest share of the regular annual budget of the UN. Since 1946, Canada has contributed over \$700 million to the UN family of organizations.

Prime Minister Trudeau visited Her Majesty Queen Juliana during a recent trip to the Netherlands.



Canada and the Commonwealth

As the colonies within the British Empire assumed self-government and independence, similarities of language, habits, institutional traditions and working methods convinced many national leaders that maintaining some form of association would be valuable. The fruit of that belief is the modern Commonwealth. In this association the shared values and traditions derived from historical experience permit leaders to exchange views in a confidential and informal atmosphere missing in more complex international organizations. The Commonwealth is able to transcend the differences of ideology, race, region or degree of economic development, and to bring a global, multiracial perspective to bear on matters of concern to all members.

The biennial meetings of Commonwealth heads of government and the annual meetings of Commonwealth finance ministers attract wide public attention. The public is less aware of the other exchanges that take place regularly under Commonwealth auspices — among parliamentarians, academics, educators, scientists, journalists, broadcasters, health officials and youth leaders.

Canada's close ties with other members of the Commonwealth involve it in areas of co-operation outside the institutional structure of the association. For example, Commonwealth countries have been among the major recipients of Canadian bilateral development assistance. The Commonwealth Air Transport Council met in Ottawa in 1975, and in 1978 Canada will host the Commonwealth Games in Edmonton, Alberta.

Canada and the French-speaking Community

To demonstrate abroad the bilingual aspect of Canadian society, the federal government fosters the broadening and strengthening of ties with Francophonie — an association of countries that are entirely or partially French-speaking. In the last few years, relations with the French-speaking countries of Europe have been considerably expanded and diversified, particularly in the scientific and technological fields. These relations have been complemented by the establishment of many ties with the French-speaking countries of the Third World. In addition to development aid, which remains the principal focus, there is a gradual growth of cultural and economic exchange.

Canada also plays a very important role within multilateral organizations such as the Agency for Cultural and Technical Co-operation, the Conference of Ministers of Education and the Conference of Youth and Sports Ministers of francophone countries.

The provinces are invited to take part in the work of joint commissions and in the implementation of Canadian government aid programs on the bilateral level. On the multilateral level, in addition to participation by New Brunswick, Ontario and Manitoba in some activities of the Agency, the federal government and the government of Quebec have agreed on an arrangement under which the latter has been admitted as a participant in the Agency's institutions, activities and programs.

Federal-Provincial Aspects of International Relations

The Canadian provinces have an obvious interest in the international aspect of matters for which they have domestic responsibility. The Department of External Affairs maintains close liaison with the provinces to facilitate their international

pursuits to meet provincial objectives while remaining consistent with a unified Canadian foreign policy.

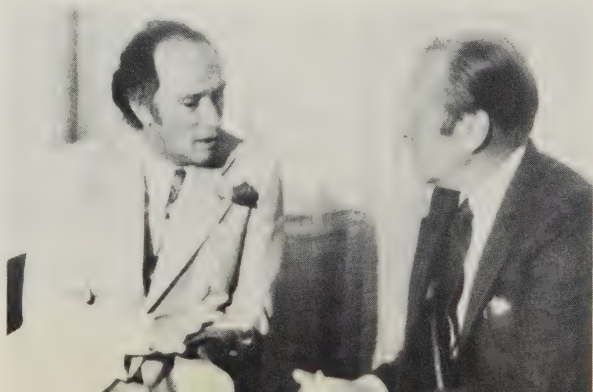
Provincial participation at international conferences and in the work of international organizations on subjects of interest to the provinces is assured by including provincial officials in Canadian delegations and by canvassing of provincial governments for their views on the positions and attitudes that the Canadian government might adopt on these subjects internationally. The federal government assists provincial officials by making arrangements and appropriate appointments for provincial visits abroad and by co-ordinating visits of foreign dignitaries to the provinces. During negotiation of formal agreements between Canada and other countries, consultations take place between the federal government and the provinces if the terms of such agreements touch on provincial or joint federal-provincial fields of jurisdiction.

Other Activities of the Department of External Affairs

Most Canadians who come into contact with the Department of External Affairs do so in order to apply for a passport or to request assistance from Canadian consular officials. In 1974 the Department issued a total of 543,000 passports through its eight passport offices in Canada and its posts abroad. Approximately 190,000 Canadians requested a service of some kind from a Canadian post abroad; 5,200 of these requests were serious matters involving arrest, illness, death or destitution. The Department also assists Canadian citizens and corporations seeking fair compensation from foreign governments for nationalization or other interference with their property.

All but a handful of Canada's diplomatic and consular offices abroad undertake public information and cultural activities of varying scope. The public information program has been developed to support the achievement of Canada's foreign-policy goals abroad, and is intended also to promote the international interests and endeavours of Canadian individuals, businesses and institutions. The object of the cultural affairs program is to reflect abroad the growing creativity of Canada's cultural life by helping Canadian artists and academics gain access to foreign cultural milieu and to acquire, at home, acquaintance with the work of their foreign counterparts. There is also an academic relations program aimed at establishing and developing lines of communication between academics in Canada and abroad, concerned with foreign policy studies, and officials who are responsible for implementing policy.

Prime Minister Trudeau and President Ford in Brussels at the North Atlantic Treaty Organization's summit meeting.



Canadian International Development Agency (CIDA)

The Canadian International Development Agency is the government branch that carries out Canada's program of co-operation with developing countries. The program began in 1950, when Canada became a founding member of the Colombo Plan, established to assist newly-independent countries in Asia. As Commonwealth countries in the Caribbean and Africa shed their colonial status, assistance programs for those areas were established, in 1958 and 1960 respectively. Development aid programs for the French-speaking countries of Africa and for Latin America followed in 1961 and 1964.

For the fiscal year ended March 31, 1976, CIDA had a total spending authority of \$933.2 million. This included some unspent monies allocated by the Canadian Parliament in earlier years. Total appropriations for Canada's Official Development Assistance, including instalments and advances to international organizations, but excluding the cost of administration and staff, amounted to \$780.7 million for 1975-76. By far the greatest proportion of Canada's international development co-operation is extended through bilateral (government-to-government) programs. For 1975-76 the bilateral allocation was \$570.5 million or 61 per cent of the total. As in past years the largest part of the bilateral funds (\$263.7 million in 1975-76) was earmarked for Asia. Commonwealth Africa was to receive \$94.7 million, Francophone Africa \$87.6 million, Latin America \$40.5 million and the Commonwealth Caribbean \$31.0 million. The remainder of the bilateral funds was to be spent on other countries and other programs, including food aid and international emergency relief. Canada's bilateral development co-operation takes four major forms: project assistance, food aid, commodity aid and lines of credit. Project aid is the largest single kind of CIDA co-operation. Under this system Canada provides loans and grants for specific development projects, which the developing country and CIDA have jointly agreed upon.

Food aid, though really only a stop-gap measure, is an important part of Canadian assistance. Canadian food aid appropriations for 1975-76 totalled \$280 million, an increase of 41.4 per cent over the previous fiscal year. The figures include food aid given under CIDA's multilateral program. The bilateral food aid program included \$56 million to India and \$29 million to Bangladesh. The third kind of bilateral assistance, commodity aid, is essentially a drawing account against which a developing country can purchase specific raw or semi-processed materials and fertilizers in Canada. Agreements for line-of-credit loans, the fourth form of bilateral co-operation, are in effect with a number of countries for a total of over \$100 million. Canada's assistance has traditionally consisted of outright grants or loans (usually with maximum concessionality — no interest, repayment over 50 years starting in the 10th year — or sometimes with medium concessionality — 3 per cent interest, repayment over 30 years starting in the eighth year). For 1975-76 the ratio between loans and grants was expected to remain around 35:65.

CIDA has authority to cover shipping costs and to make available up to 20 per cent of the bilateral program on a completely untied basis (free to be used for purchasing goods and services outside Canada) for projects and programs of particularly high development priority. Almost without exception multilateral funds have been made available without procurement restrictions. In the bilateral program, the 80



CIDA has furnished Nepal with a number of Twin Otters, STOL aircraft, to provide transportation to remote villages.

per cent spent in Canada must, except for shipping costs, satisfy minimum Canadian value-added norms — $66\frac{2}{3}$ per cent.

The second largest portion of Canada's aid budget is devoted to multilateral assistance. For 1975-76 a sum of \$302.4 million was set aside for this type of assistance. This represented a 60 per cent increase over the previous year's multilateral disbursements. In 1975-76 the World Food Programme replaced the International Development Association (IDA), a branch of the World Bank, as the largest recipient of Canada's multilateral funds. Canada's contribution to the IDA's fourth replenishment, covering the years 1975-77, will total \$276 million over four years. Canada is a member of the Asian, Caribbean and Inter-American Development Banks, and was a moving force behind the establishment of the African Development Fund. Canada has been a major contributor to the United Nations Development Program since its inception in 1965. CIDA's 1974 contribution was \$21.7 million, plus an additional \$500,000 for the least developed nations. Canada also contributes to other UN programs, such as UNICEF and the World Food Programme.

A growing part of Canada's assistance program is carried out by voluntary agencies, churches, universities and other non-governmental organizations (NGOs). CIDA subsidizes selected NGO projects up to 50 per cent of their cost. Allocations for 1975-76 in support of NGOs amounted to \$31.8 million. CIDA also encourages Canadian business to participate in the industrial development of Third World countries through investment in joint ventures.

Relatively unscathed by the energy crisis and related upheavals, Canada has taken a full role in the international effort to help those countries hardest hit by the current malaise. Canada has: pledged to provide 10 per cent of the World Food Conference food aid target; pledged \$300 million to a special International Monetary Fund account to finance oil purchases by countries with serious balance of payment problems; extended a General Preferential Tariff to make various goods

manufactured in developing countries more competitive in Canada; agreed to permit the World Bank to make advance commitments against Canada's four-year, \$276 million pledge to the IDA; announced a five-year, \$230 million program for the Sahel in Africa; authorized a special expenditure of \$100 million for food and fertilizer for Asia and Africa; and allocated \$280 million in food aid for 1975-76.

However, after 25 years of development assistance it is becoming increasingly clear that the answer to the problems of poverty and under-development lies in a new concept of co-operation, in which the fully complementary and inter-related roles of concessionary financial aid, technical assistance, trade and monetary policies are recognized. This co-ordinated approach is expected to be reflected more and more in future relations between the industrialized countries, including Canada, and the developing world.

Canadian Executive Service Overseas (CESO)

Incorporated as a non-profit company late in 1967 by a group of Canadians prominent in industry and the professions, CESO functions under the auspices of the Canadian International Development Agency. One part of its assigned task is to recruit for overseas service Canadians who have a record of achievement in their chosen fields and whose personal qualities make them good communicators. The other part of the mandate is to make it known in developing countries that there are Canadians willing to share their specialized knowledge with local enterprises that are seeking to improve their contribution to the economy of their own countries.

Its system is simple and direct. The volunteer consultant having expressed willingness and ability to go abroad is on the CESO roster. When an overseas request is expressed for the services of a voluntary consultant, the roster is searched and one or more appropriate specialists are nominated by CESO. Ultimately the volunteer will have the opportunity to accept or reject the particular project and the client may accept or reject the particular volunteer. At the beginning of the 1975-76 fiscal year approximately 1,100 projects had been undertaken in over 40 different countries. The number of projects grows at a carefully controlled rate.

But there has been another and highly interesting development for CESO volunteers in Canada. The Department of Indian Affairs and Northern Development, through an Economic Development Program, is striving to help Canadian Indian bands to help themselves attain more comfortable economic circumstances. A wide range of expertise is required over an even wider range of geography as Indian bands in every province are taking advantage of the services of skilled consultants available through CESO. The projects range from motels to an eel farm, from resorts to agricultural ventures. The collaboration is intimate as the Department covers the cost and provides direction while CESO administers the plan and provides the consultants. Here again the numbers are impressive. At the beginning of this fiscal year over 70 volunteers were working with Indian bands from coast to coast.

Finally CESO provides the opportunity for people to extend their careers beyond normal retirement by sharing their skills and knowledge with others who can and will benefit from expert advice and guidance. CESO regards this by-product of the program as an important privilege and welcomes the opportunity to preserve the accumulated knowledge of Canadian experts through productive employment.

Canadian University Service Overseas (CUSO)

CUSO began in 1961 with 17 volunteers in seven occupations going out to four developing nations in Asia and Africa. The volunteers' job was to fill manpower gaps in trades and professions until local people could be trained to take their places. From those 17 university graduates, CUSO has grown until in 1975 there were about 900 volunteers in 70 categories, serving in 44 nations from Jamaica to Tonga.

Most of them are still university graduates, but not all. A growing number of requests are for technical people, skilled tradesmen and farmers with a solid background of both training and practical experience. The ages of the volunteers range from 22 to 79, with the average around 25 but a growing number are in the 40 to 60 bracket. Two things have not changed: the relationship between CUSO and the host nation is still dictated by the plans and priorities of the country concerned and volunteers are paid by their hosts at the going local rate.

CUSO has introduced a craft program in Thailand, encouraging hill-tribe crafts people to produce traditional garments.



In the past years, CUSO has broadened its terms of reference to embrace projects in co-operation with the host nations. A volunteer assigned as production manager in a Bangladesh factory proposes capital expenditure to replace tools and spare parts taken by looters or destroyed in the war. A physiotherapist sees the need for a playground for handicapped children in her area, and asks CUSO for help to build and equip it. A clinic owner realizes that education of mothers in basic hygiene and nutrition would go a long way toward reducing the local infant mortality rate of 55 per cent; CUSO commits itself to raising the funds to build a nutrition centre. The projects are based on the same premise as the rest of CUSO's operation: projects are undertaken according to the priorities of the host nation and with their co-operation at every level from the government ministry involved right down to the individual villager making bricks.

CUSO is an independent non-profit organization with direct and indirect financial support coming from four sources. A grant from the Canadian International Development Agency (CIDA) provides 52 per cent of the funds needed; employers in the host country add 36 per cent in salaries and benefits to CUSO volunteers; and 12 per cent comes from the private sector in the form of participation in the sponsorship program and involvement in the Miles for Millions marches. Indirect support conservatively valued at over \$500,000 annually comes from many sources. The mass media carry recruitment advertising at no charge. Pharmaceutical companies provide free medical kits; universities and colleges provide office space, equipment and staff for local recruitment and selection committees. In Ottawa, low-cost access to the facilities of the Association of Universities and Colleges of Canada helps keep administrative costs down.

International Development Research Centre (IDRC)

The IDRC was created by an Act of the Canadian Parliament in 1970 when the need was recognized for a donor agency that had more flexibility than a government department to support research into the problems of developing countries. The objective of the Centre has been to promote the economic and social development of those regions — particularly the well-being of their rural peoples — by research designed to adapt scientific and technical knowledge to their specific requirements.

This research is being accomplished almost entirely by scientists and technologists from the countries and regions involved, in accordance with their own priorities. The role of the Centre's senior staff is to help refine research proposals, recommend projects for funding, monitor their progress and disseminate the results as widely as possible. The provision of funds for researchers in developing countries to direct their own studies and learn how to solve their own problems is possible only because IDRC, unlike government agencies, is able to offer "untied aid."

Research Programs

Within a general concern for the advancement of rural peoples, there is a focus on research in four areas: agriculture, food and nutrition sciences; information sciences; population and health sciences; and social sciences and human resources, of



In connection with an IDRC program, grade 4 students in the Philippines are working with self-instructional material which allows students to move at their own pace.

which the following are examples: 1. The testing in different climatic conditions, in Algeria, India, Kenya and Chile, of varieties of triticale, a hybrid cereal developed by crossing wheat and rye in collaborative research carried out in Mexico and at the University of Manitoba. 2. The launching from Dakar, Senegal, of a magazine *Famille et Développement*, to meet the specific needs of health workers in francophone African states. 3. An evaluation of 10 years experience of the Simplified Medicine program in Venezuela, in which medical auxiliaries give health care under supervision at village level. 4. An experiment in a dozen rural primary schools in the Philippines and Indonesia with self-instructional kits to allow students to move at their own pace, and teachers to handle more students.

Proposals are judged on such factors as whether they fit into the priorities of developing countries; whether they are likely to have useful application beyond the country involved; whether the research will help close gaps in living standards inside these countries; whether they will make full use of local resources and people; and whether they will leave behind investments in better trained or more experienced researchers.

The Centre is a public corporation with an international Board of Governors and an international staff. The chairman, vice-chairman and nine others of the 21 governors must be Canadian citizens, but the Board in 1974-75 also had members from Ethiopia, Zaïre, Iran, Indonesia, Mexico and Jamaica, as well as from Britain, France, the US and Australia. The Chairman was Louis Rasminsky and the President W. David Hopper. Four IDRC regional offices have been set up in Singapore, Bogota, Dakar and Beirut.

Financing has so far come entirely from the Canadian government in the form of annual grants. In 1974-75 the grant was \$19 million and is expected to rise in future years to approximately 5 per cent of Canada's foreign aid budget. As at March 31, 1975, IDRC had approved a total of 252 projects, involving 175 recipients in 75 countries, to an amount of \$50.1 million.

National Defence

As stated in the White Paper on Defence dated August 1971, a catastrophic war between the superpowers constitutes the only major military threat to Canada. Since in such an event there would not be much that Canada itself could do directly in self-defence, its overriding defence objectives must be to prevent nuclear war by promoting political reconciliation, by working for arms control and disarmament, and by contributing to the system of stable mutual deterrence. The government's policy therefore is to contribute to peace by participating in collective security arrangements.

Canada's military role in North American defence includes contributing to the stability of deterrence by assisting the US in operating a comprehensive system of warning and providing some active defence against any potentially hostile air, sea, or land forces within the North American area. The Canadian government has decided that to the greatest extent feasible defence activities on Canadian territory will, in normal peacetime circumstances, be carried out by members of the Canadian Armed Forces. During periods of international crisis, however, special arrangements are required to increase the protection of North America and to contribute to the maintenance of stable mutual deterrence. There are, therefore, a number of bilateral Canadian-American defence agreements that specify the terms and conditions of joint co-operative defence arrangements for Canadian territory, airspace and waters.

The control and management of all matters relating to National Defence, the Canadian Armed Forces, the Defence Research Board, and Defence Construction (1951) Ltd., are the responsibility of the Minister of National Defence. Until October 1973, he was also responsible for the Canadian Emergency Measures Organization which, effective April 1, 1974, was renamed the "National Emergency Planning Establishment" and given wider responsibilities for the co-ordination of civil emergency planning. This new organization will remain, for administrative purposes, within the Department but will report to the Privy Council Office. However, the Minister of National Defence will continue to be responsible for certain civil emergency powers, duties and functions.

The manning level of the forces has been progressively reduced over the past eight years. In 1964 the total strength was approximately 120,000; by late 1974 it approximated 79,000, and it is planned to stabilize the total strength at around this figure. In 1974 the defence budget was \$2,436 million.

Canadian forces allocated to support NATO in Europe are under the jurisdiction of Canadian Forces Europe. These forces, located in the Black Forest region of southern Germany at Lahr and Baden-Soellingen, consist of a land force—4th Canadian Mechanized Brigade Group—and an air force—1st Canadian Air Group. The two

forces come under the command and control of a single Commander of the Canadian Forces (Europe). The air group consists of three conventional attack squadrons of CF-104 aircraft.

An important aspect of Canada's defence and foreign policy is the support of peacekeeping and truce supervisory operations, particularly those conducted under the auspices of the UN.

Canada's largest peacekeeping commitment in 1974 was in the Middle East where approximately 1,100 Canadian Forces personnel were serving with the UN Emergency Force.

Since March of 1964, a contingent of Canadian Forces personnel has been serving with the UN Force in Cyprus. It was dispatched to Cyprus as a result of inter-communal strife there. During 1974, for six months, this force — normally around 450 personnel — was doubled at the request of the UN to cope with the renewed violence between Greek and Turkish Cypriots. As the situation in Cyprus became more stable toward the end of 1974 the Canadian contingent in Cyprus was reduced to approximately 500 military personnel.

Since the success of these operations may depend on the speed with which such missions can be established on the ground, the Canadian Forces maintain a number of individuals on standby to ensure a quick response.

Dives beneath the ice at the North Pole were part of an exercise to establish capabilities of deploying Canadian search-and-rescue forces in the Arctic. Neoprene constant volume dry suits allow divers to stay in Arctic waters up to two and one-half hours without getting cold.



Health Care

Health service administration is primarily under provincial jurisdiction, but municipalities sometimes exercise considerable delegated authority. The Department of National Health and Welfare has jurisdiction over a number of health matters of national scope and provides important financial assistance to provincial health programs. Its health branches are Health Protection, Health Programs, Medical Services, Fitness and Amateur Sport and Long-Range Health Planning. The Medical Research Council also reports to Parliament through the Minister of National Health and Welfare. Statistics Canada, the Department of Veterans Affairs and the Department of Agriculture also carry out specialized health functions.

In April 1974, the Minister of National Health and Welfare issued the working document *A New Perspective on the Health of Canadians*, which stressed the great need to protect and improve health and to help prevent such principal causes of morbidity and mortality as lung cancer, cardiovascular disease and traffic accidents. It emphasized that it is now particularly important to improve the social and physical environments in which man lives, and to improve his lifestyle.

Each province assigns health to one department, although some combine it with social services. Some provincial health programs are administered by semi-autonomous commissions. Every provincial health department provides care for tuberculosis and mental illness, increasingly directing attention to prevention. Programs related to cancer, alcoholism and drug addiction, venereal diseases and dental conditions have been developed, often in co-operation with voluntary associations. Other provincial programs assist specific groups, such as mothers and children, the aged, the needy and those requiring rehabilitation. Environmental health responsibilities are frequently shared between health departments and other agencies. Public health and community health units, generally decentralized, provide health education, school health and organized home-care.

Insured Services

Public Medical Care

Under the Medical Care Act, which began to operate in 1968 and was nation-wide by early 1972, the federal government contributes to each participating province half the national per capita cost of insured medical services for each insured person in that province. The federal contribution in the fiscal year 1973-74 was \$678 million. The provincial plans must cover all medically required services rendered by a physician, be available to all eligible residents on equal terms and conditions and actually cover at least 95 per cent of them, provide coverage between provinces and be administered by a non-profit authority.

Several methods are used by the provinces to finance their share of the cost. Premiums are levied in Ontario, Alberta, British Columbia and the Yukon Territory. The characteristic mode of paying physicians is a fee for each insured service rendered. Some provincial plans insure residents for benefits not eligible for cost-sharing by the federal government under the Medical Care Act, such as the services

of optometrists, chiropractors, podiatrists (chiropodists), osteopaths, naturopaths and dentists, and the cost of some prescribed drugs.

Hospital and Institutional Care

Provincial hospital insurance programs since 1961 have covered 99 per cent of the population of Canada through the Hospital Insurance and Diagnostic Services Act, under which the federal government meets about half the cost of providing specified hospital services other than in tuberculosis or mental hospitals or institutions providing custodial care. Insured in-patient services must include accommodation, meals, necessary nursing service, diagnostic procedures, most pharmaceuticals, the use of operating rooms, case rooms, anaesthesia facilities, and, if available, radiotherapy and physiotherapy. Similar out-patient services may be included; all provinces include some. Federal payments to the provinces (including Quebec, where the federal contribution is made through tax abatement) under this program for 1973-74 amounted to \$1,517 million.

In most provinces coverage is automatic for all residents. Some plans insure

The present-day Hospital for Sick Children in Toronto began 100 years ago when a group of women rented an 11-room house for \$320 a year.



services not eligible for cost-sharing under the federal Act, such as care in psychiatric hospitals and in nursing homes, ambulance service, physiotherapy and occupational and speech therapy in non-hospital facilities, home renal dialysis and care in senior citizens' lodges or hostels.

Provinces finance their portion of the cost of hospital care by general revenue, premiums, sales or property tax, or various combinations of these. Ontario and Alberta levy premiums, but no premiums are payable by persons 65 years of age or over.

Other Programs and Services

Federal

Health Manpower Development. This Department of the National Health and Welfare program is intended to improve and maintain the quality of service of those employed in health care. It includes the administration of the Health Resources Fund Act of 1966, which provided \$500 million payable over the period 1966 to 1980 to assist in planning, acquisition, construction, renovation, and equipping of health training and research facilities.

As of December 31, 1973, there were 36,095 active civilian physicians in Canada including interns and residents. Well over a third, 13,726, were located in Ontario. British Columbia and Ontario had the most favourable population-to-physician ratios — 575 and 585 respectively — compared with the national figure of 618.

Community Health. The federal community health program promotes healthful lifestyles and readily accessible comprehensive community health services. It develops health promotion and health education services, seeks to increase public awareness of health responsibilities and works with health agencies to improve personal health. It facilitates co-ordination of community health services planning and encourages shifts in emphasis from institutional to ambulatory care and from curative to preventive services.

Indian and Northern Health Services. The Department of National Health and Welfare assists Indian bands and native peoples' organizations in providing health services and promoting health. Health facilities have been constructed in almost 200 communities that otherwise would lack them. The Department manages many communication arrangements for medical consultation, and transportation to referral medical centres.

Food and Nutrition. The Department conducts food research, inspects food-manufacturing establishments and controls chemical additives used in foods. Nutrition Canada, a nation-wide survey, revealed a very high prevalence of obesity in Canadians throughout the country and sub-optimal supplies of iron, vitamins C and D and folic acid.

Drug Quality Control. Health and Welfare inspectors regularly visit pharmaceutical plants to ensure that the drugs produced there meet the quality standards required for sale in Canada. New drugs are carefully controlled by the Department, and after a new drug is on the market, its sale can be banned if it appears unsafe. The Department assesses claims and clinical equivalency of competing brands and

publishes the findings to enable the public to purchase high quality drugs at a reasonable price.

Non-Medical Use of Drugs. This program combats drug abuse, seeks ways of dealing with its effects and rehabilitating its victims, and conducts information and education programs to prevent drug abuse and persuade smokers to stop and young people not to start smoking.

International Health. Canada actively assists the World Health Organization (WHO) the Pan-American Health Organization (PAHO). Persons come to Canada each year for health training under WHO/PAHO fellowships and Canadian health experts undertake specific assignments abroad in response to international requests. The Department enforces the International Shellfish Agreement with the US, safeguards biological standards for the World Health Organization and enforces the Single Convention on Narcotic Drugs of 1961.

Fitness and Amateur Sport. This federal program seeks to increase the physical fitness of Canadians and increase their participation in physical recreation and amateur sport.

Long-Range Health Planning. This branch is responsible for assessing the orientation of health services and the organization of factors influencing the health of Canadians, in the perspective of the objectives and evolution of our society. It also collaborates with other branches of the Department in making presentations for implementing its proposed orientation.

Other Services. The Department of National Health and Welfare also inspects the health of those arriving from foreign countries. It is responsible for the occupational health of federal employees and advises Transport Canada on health and safety in civil aviation. It provides prosthetic and orthotic rehabilitation and assesses disability claims under Unemployment Insurance and the Canada Pension Plan. It



The Standing A Frame improves the natural growth in disabled children.



High-speed vibrations loosen opaque material which is then sucked out by machine in cataract surgery.

advises the provinces on health matters; advertises to promote better health habits; and makes emergency health plans, studies effects of pollution and monitors radiation exposure. Its laboratory centre for disease control combats communicable diseases and studies epidemics.

Provincial

Mental Health Services. Among provincially operated health services, those for mental illness loom large; in 1972 mental institutions cost \$470 million, while their personnel numbered 51,000. During 1974 the number of in-patients under care was 56,000 and there were 126,000 admissions to mental institutions; in 1972 some 246,000 patients were treated in mental health clinics and psychiatric out-patient departments. Psychiatric units in general hospitals contribute by integrating psychiatry with other medical care and making it available to patients in their own community; in 1974, the 125 psychiatric units, which had 4,136 patients as the year closed, admitted 46 per cent of the total admissions to all kinds of mental institutions.

Alcoholism afflicts at least 2 per cent of adult Canadians. Official and voluntary agencies conduct public education, treatment, rehabilitation and research. Community treatment programs for narcotic addicts have been established in British Columbia and Ontario, supported primarily by provincial funds.

Facilities for mentally retarded persons include day training schools or classes, summer camps, and sheltered workshops, as well as residential care in institutions.

Cancer. Cancer accounts for one of every five deaths, most of them in middle and later life. Provincial cancer control agencies carry out detection and treatment, public education, professional training and research. Cancer programs in all provinces provide a range of free diagnostic and treatment services.

Tuberculosis. In 1973 there were 408 deaths from tuberculosis. Canadians reported to be under treatment for tuberculosis in 1972 numbered 8,543 while 16,222 susceptible persons received preventive prophylactic drugs.

Venereal Disease. Authorities estimate that the number of cases of venereal disease may be three to four times the number reported. The 1973 figure of 3,766 cases of syphilis was substantially above the 1972 figure of 3,064. The total figure for gonorrhea cases in 1973 was 45,329, a marked increase over the rate for 1972. Provincial health departments have expanded public VD clinics, which provide free diagnostic and treatment services at convenient hours.

Public Health Services. Provincial, regional and local health authorities administer such services as environmental sanitation, communicable disease control, maternal and child health, school health, nutrition, dental health, occupational health, public health laboratories and vital statistics. Case-finding, screening, diagnosis and referral, and health education have continued to be the responsibility of local authorities. Some smaller local services have been amalgamated to increase their effectiveness.

Research

Federal expenditures for health science research in 1973-74 were estimated at \$74.7 million. The expenditures are accounted for by the Medical Research Council, \$40.4 million, the Department of National Health and Welfare, \$33.0 million and other federal agencies, \$1.3 million.

The Department of National Health and Welfare makes most of the federal government's expenditures on intramural health research. Extramurally, in 1972-73, the Department distributed \$10.3 million under the National Health Research and Development Program for applied and developmental research and related scientific activities.

The National Health Research and Development Program makes contributions for support of studies, research, demonstration projects, preliminary development, research training and research-career development. These activities are related to health promotion, disease and accident prevention, environmental health, rehabilitation, epidemiology, health care analysis, improvement of health services, the appropriateness of training programs for health workers and the determinants of health.

Health statistics are collected by Statistics Canada and the Department of National Health and Welfare, with co-ordination by an interdepartmental committee. Plans are under way for a jointly-operated continuing Canada Health Survey, including household interviews and voluntary medical examinations.



Immigration

More than 10 million immigrants have come to Canada since Confederation and they have played a major role in the development of this country. Canada's nondiscriminatory and universal immigration policy allows for the recruitment of immigrants possessing skills required by the economy. Due to changes in labour requirements in Canada and economic conditions in the principal source countries, immigration has varied from year to year.

Since World War II, Canada has admitted more than 3.6 million immigrants, primarily from Great Britain, Italy, the US, West Germany and the Netherlands. The peak years for immigration since World War II were 1957 when 282,164 persons were admitted, and 1967 when 222,876 settled in Canada. During 1974 Canada received 218,465 immigrants, an increase of 34,265 over 1973. Britain was the major source country, followed by the US and Portugal.

Ontario continued to attract the greatest number of immigrants, (120,115), British Columbia was second (34,481) and Quebec third (33,458). Seventy-eight per cent of the 1974 immigrants were under 35 years of age.

On October 1, 1967, new immigration regulations spelling out the principles for selection of immigrants came into effect. Through a points system, immigration officers apply the same standards, in the same way, to potential immigrants from all areas of the world. By linking selection standards to conditions within Canada, the regulations ensure that the flow of immigrants is suited to the economic and labour requirements of the country. Clear distinction is made between dependents and other relatives entering the work force. There are three categories of immigrants to Canada: "sponsored dependents", "nominated (non-dependent) relatives" and "independent applicants", who are neither sponsored nor nominated.

Sponsored dependents, such as spouses and children under age 21, must be directly related to citizens or permanent residents of Canada who will be responsible for their accommodation, care and maintenance. They are admitted to Canada provided they are in good health and of good character. Nominated relatives are defined as sons and daughters aged 21 or over, married sons and daughters under age 21, brothers, sisters, parents or grandparents under age 60, nephews, nieces, uncles, aunts and grandchildren, but not cousins. Independent applicants must meet certain standards based on education and training, pre-arranged employment, personal assessment, occupational skill, age, knowledge of English or French, relatives in Canada, and employment opportunities at their destination. Independent and nominated applicants must score 50 out of a possible 100 points to be admitted.

The immigration regulations of 1967 permitted visitors to apply for landed immigrant status from within Canada. However, on November 3, 1972, the Department suspended this right because immigration policy was being abused.

On January 1, 1973, the Department introduced new non-immigrant entry records and employment visa regulations to control the employment of visitors in Canada. All non-immigrants entering Canada for longer than three months are required to register at ports of entry, inland Canada Immigration Centres, or Canada Manpower Centres. In addition, people coming to work temporarily must obtain

employment visas. Visitors are not admitted to Canada to search for work; they must have proof of a bona fide job offer. If there is no Canadian citizen or landed immigrant qualified or available for the job, the non-immigrant applicant will be issued an employment visa.

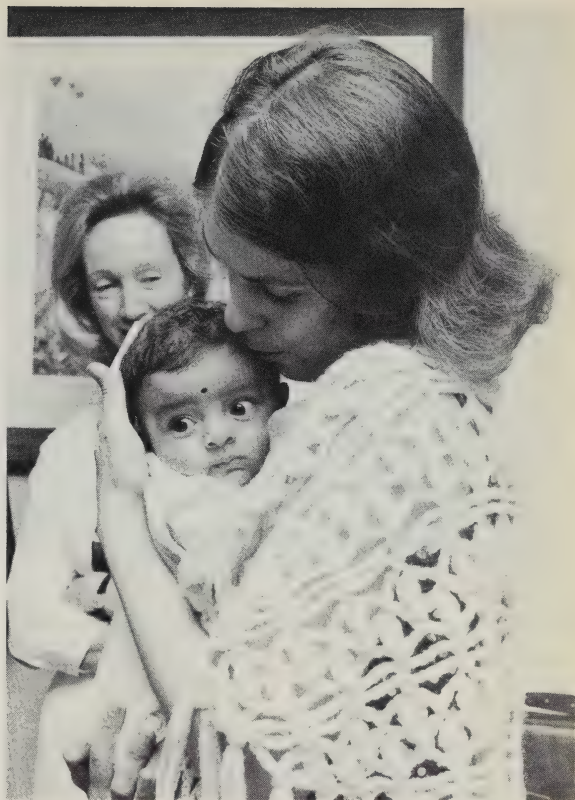
New immigration regulations, effective February 1974, also linked the admission of unsponsored immigrants to the needs of Canadian employers. A non-dependent immigrant must have a firm job offer from a Canadian employer or possess occupational skills which are in persistent demand in the region of Canada where the applicant intends to settle. A further change in the regulations in October 1974, specifies that unsponsored immigrants receive credit for pre-arranged employment only after it has been ascertained that no Canadian citizen or permanent resident is available to fill that job vacancy.

New measures have also been introduced to make it easier for families with adopted children, half-brothers or half-sisters to come to Canada together.

Not all non-immigrants are prevented from working in Canada. Diplomats and visiting Armed Forces personnel performing official duties are exempt. Foreign journalists, visiting business executives, clergy and professional athletes do not



Canada's immigration regulations provide temporary employment visas to non-immigrants during labour shortages or periods of high seasonal demand.



More than 10 million immigrants have come to Canada since Confederation.

need an employment visa, but they must register if they stay in Canada longer than three months.

Canadian immigration offices or the services of an immigration officer are extended to 42 countries, including Argentina, Australia, Austria, Belgium, Britain, Colombia, Denmark, Egypt, Finland, France, Germany, Greece, Hong Kong, Hungary, India, Ireland, Israel, Italy, Jamaica, Japan, Korea, Lebanon, Malaysia, Mexico, Morocco, the Netherlands, Norway, Pakistan, the Philippines, Poland, Portugal, Spain, Sweden, Switzerland, Trinidad, the US and Yugoslavia. Of those listed, offices were opened in 1973 in Seoul, Korea; Rabat, Morocco; Warsaw, Poland; and Singapore, as part of a world-wide extension of Canadian immigration services abroad. The same year nine offices were opened in the US — at Boston, Buffalo, Detroit, Minneapolis, Seattle, Los Angeles, New Orleans, Dallas and Atlanta — for a total of 12, including the existing branches at San Francisco, New York and Chicago. In 1974, offices were opened in Bogota, Colombia, and in Mexico City, Mexico.

Agreement was also reached to provide immigration services to the People's Republic of China out of Hong Kong. The 247 Canadian immigration officers stationed abroad make periodic visits to other countries in their area to process applications.

Industry, Trade and Commerce

The Department of Industry, Trade and Commerce seeks to promote the growth of the Canadian economy by stimulating the establishment, growth and efficiency of industry, the development of export trade and external trade policies, the expansion of tourism and the travel industry, and the marketing of grains and oilseeds. To carry out its programs and meet its objectives, the Department requires the services of a staff of more than 2,500 with offices in Ottawa, 10 regional offices across Canada and 88 posts in 63 countries.

Industry Development

Through its many incentive and development programs, the Department offers assistance with expert advice and information and in many cases financial help to the Canadian businessman. The objectives of the Department's programs are to develop an efficient manufacturing and secondary processing industry to meet competition at home and abroad; to increase the domestic processing of natural resources; and to provide for a greater domestic control of the Canadian economy and ensure its future development by Canadians. The Department also seeks to achieve and maintain maximum employment in Canadian industry; to increase national income and reduce economic disparities.

International Trade

By providing information on export opportunities and by giving sales assistance, the Department strives to increase the international market for goods and services produced in Canada. Trade arrangements are negotiated by the Department of

Ski lodge at Banff, Alta., where ski slopes attract a multitude of tourists.





Halterm container port in Halifax, NS.

Industry, Trade and Commerce to give Canadian producers access to world markets. In addition, the Department develops trade strategies, provides financial assistance and maintains Canadian trade representatives throughout the world.

Tourism

The sustained and orderly growth of tourism and the travel industry in Canada is the objective of the tourism program. To encourage both Canadians and visitors to explore Canada, the Department provides information, market research and analysis, market planning and a variety of promotional campaigns in all news media. The requirements for expanding the travel industry are assessed and various programs to assist that development have been devised. A policy, planning and industry relations section of the Department provides direction to the tourism program and co-ordinates the efforts of federal, provincial and private developers of the tourist industry.

Grains and Oilseeds

While the management of a system for marketing Canadian grains and oilseeds and the expansion of markets for these products comes under the Minister responsible for the Canadian Wheat Board, the Deputy Minister of Industry, Trade and Commerce is responsible for its marketing operations and for administering payments made under the program. The marketing activity is intended to complement and extend efforts by the private sector through the provision of market intelligence and financial assistance. Production guidelines are determined and initial payments for Wheat Board grains are established.

Labour

Labour Legislation

Labour legislation is enacted by both the federal Parliament and the provincial legislatures. Parliament has authority to enact labour laws relating to any federal work, undertaking, or business that is under its legislative authority, such as air transportation, navigation, or other operations that it declares to be for the general advantage of Canada or for more than one province.

Labour Standards

In the labour standards field, a minimum age for employment and minimum standards of wages, hours and overtime, annual vacations, and public holidays for workers under federal jurisdiction are set by the Canada Labour Code. A number of additional employment standards—including maternity leave, equal pay, notice of termination of employment, and severance pay—were established by amendments to the Code in 1971. Similar standards in most of these areas are set by provincial legislation.

A compulsory school attendance law in each province forbids the employment of school-age children during school hours. In general, 18 years is the minimum age for work underground in a mine and 15 or 16 years the minimum age for other employment. Minimum wages applying to most employees have been established in every jurisdiction. Wage payment and wage collection laws have been a subject of legislative attention in recent years.

Eleven jurisdictions—the federal, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Quebec, Prince Edward Island, Nova Scotia, Yukon Territory and Northwest Territories—have general laws regarding hours of work. They either set maximum hours beyond which work is prohibited—except under special regulations or with a permit—or established standard hours after which an overtime rate must be paid. New Brunswick and Newfoundland have minimum wage orders establishing standard weekly hours after which an overtime rate must be paid. Working hours in specific industries are regulated under other laws in each jurisdiction.

Employees throughout Canada are legally entitled to a paid annual vacation. Two weeks with pay is the general standard. In Manitoba three weeks annual vacation must be paid after five years. Saskatchewan provides for three weeks after one year's service and four weeks after 13 years, with a staged reduction to result in four weeks after 10 years as of July 1, 1978. Vacation pay is payable on termination of employment before completion of a year's service.

Under legislation in British Columbia, Saskatchewan and the Yukon Territory, employees are entitled to nine paid holidays. Federal, Alberta and Northwest Territories provide for eight, Ontario and Manitoba for seven (Manitoba also has special provisions for Remembrance Day) and Nova Scotia for six.

Laws to ensure fair employment practices have been enacted throughout Canada. These include employment and employment-related subjects such as membership

General minimum rates for experienced adult workers as of May 8, 1975

Jurisdiction	Hourly rates
Federal	\$2.20 effective April 1, 1974 \$2.60 effective July 23, 1975
Newfoundland	\$2.20 effective January 1, 1975
Prince Edward Island	\$2.05 effective January 1, 1975 \$2.30 effective October 1, 1975
Nova Scotia	\$2.25 effective March 1, 1975 \$2.50 effective January 1, 1976
New Brunswick	\$2.15 effective January 1, 1975 \$2.30 effective July 1, 1975
Quebec	\$2.30 effective November 1, 1974 \$2.60 effective June 1, 1975
Ontario	\$2.40 effective May 1, 1975
Manitoba	\$2.30 effective January 1, 1975 \$2.60 effective October 1, 1975
Saskatchewan	\$2.50 effective March 31, 1975
Alberta	\$2.25 effective January 1, 1975 \$2.50 effective July 1, 1975
British Columbia	\$2.50 effective June 3, 1974
Yukon Territory ¹	\$2.30 effective April 1, 1974 \$2.70 effective July 23, 1975
Northwest Territories	\$2.50 effective April 1, 1974

¹Federal minimum wage plus 10 cents.

in trade unions. All jurisdictions except Quebec and the federal have augmented this legislation to form a human rights code. Most of these codes can be subdivided into three; general matters, employment and employment-related subjects, and occupancy and property matters. Most jurisdictions prohibit discrimination on grounds of race, religion, national origin, colour, sex, age and marital status. In selected cases the prohibited grounds include political beliefs, ethnic origin, physical handicap, creed and source of income. Equal pay provisions are in force everywhere in Canada except in Quebec. Criteria for determining the meaning of equal work vary from one act to another. Methods of enforcement also vary. The Quebec Employment Discrimination Act forbids discrimination in employment on the basis of sex, thus prohibiting, among other things, discrimination in rates of pay solely on the grounds of sex.

Parliament and eight provinces (Newfoundland, Prince Edward Island, Nova Scotia, Quebec, Ontario, Manitoba, Saskatchewan and Alberta) have enacted legislation requiring an employer to give notice to the individual worker whose employment is to be terminated. In federal undertakings, two weeks' notice is required. In Ontario and Nova Scotia the period of notice varies with length of service from one week to eight weeks. In the other provinces, notice of one week or notice equal to the regular pay period is the usual requirement.

Federal, Nova Scotia, Quebec, Ontario and Manitoba legislation requires the employer to give advance notice of mass lay-offs in order to permit government authorities to develop programs for the re-establishment of the employees affected. The length of notice required varies with the number of employees involved. Under the federal code, severance pay is given on termination of employment to an employee who has had five or more years of continuous service with his employer.

Hours of work as of May 1975

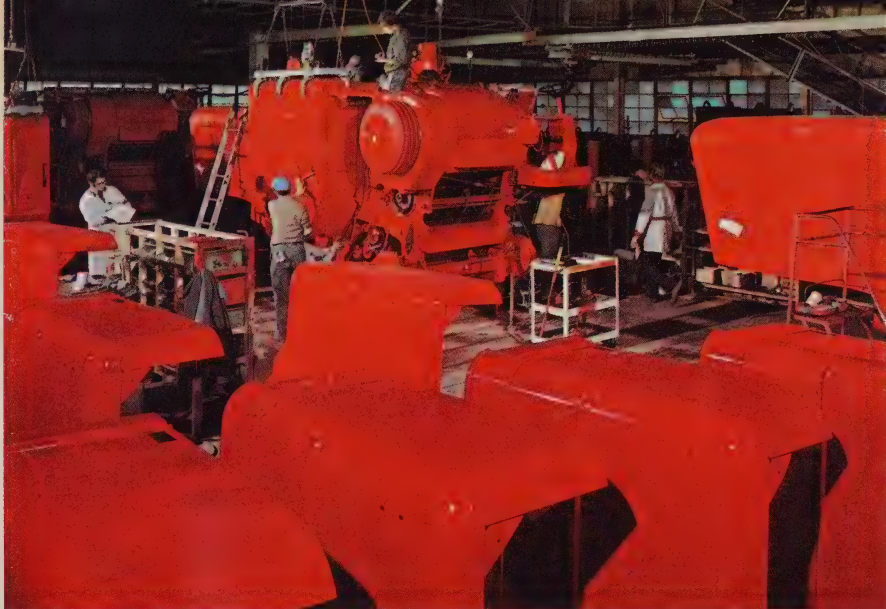
Jurisdiction	Daily and weekly limits
Federal	Standard hours: 8 daily, 40 weekly after which 1½ times regular rate must be paid
Newfoundland	Standard hours: 48 after which 1½ times the regular rate must be paid
Prince Edward Island	Maximum hours: 48 after which 1½ times minimum rate must be paid
Nova Scotia	Maximum hours: 48 after which 1½ times minimum rate must be paid
New Brunswick	Standard hours: 44 after which 1½ times the regular rate must be paid
Quebec	Standard hours: 45 after which 1½ times minimum rate must be paid
Ontario	Maximum hours: 8, 48; 1½ times the regular rate must be paid after 8 hours daily, 44 hours weekly
Manitoba	Standard hours: 8, 40 after which 1½ times regular rate must be paid
Saskatchewan	Standard hours: 8, 40 after which 1½ times regular rate must be paid
Alberta	Maximum hours: 8, 44 after which 1½ times regular rate must be paid
British Columbia	Maximum hours: 8, 44; 1½ times regular rate must be paid after 8 and 40
Yukon Territory	Standard hours: 8, 48 after which 1½ times regular rate must be paid
Northwest Territories	Standard hours: 8, 44 after which 1½ times regular rate must be paid

An employee is entitled to maternity leave of at least 17 weeks (11 pre-natal and six post-natal) under federal jurisdiction, in Nova Scotia, Manitoba and Ontario and at least 12 weeks (six pre-natal and six post-natal) in New Brunswick and British Columbia. Saskatchewan provides for up to 18 weeks (12 pre-natal and six post-natal) of maternity leave. To be eligible for leave under the federal, Ontario, Saskatchewan, Manitoba and Nova Scotia laws, the employee must have worked for her employer for at least a year. The law protects the employees against dismissal for reasons arising from maternity leave during a specified period or throughout pregnancy, and Ontario, Manitoba, Saskatchewan, Nova Scotia and the federal government guarantee that on her return to work she must be reinstated without loss of benefits.

Safety laws set minimum standards of safety and health to be observed in places of work. These laws are continually being revised to meet new conditions. Workmen's compensation laws provide benefits for disability caused by work accidents or industrial disease. Legislation is in effect in all provinces providing for government-supervised apprenticeship training and for the certification of skilled tradesmen.

Collective Bargaining

All jurisdictions have laws governing collective bargaining. These laws recognize the right of employees to organize and they require an employer and a certified



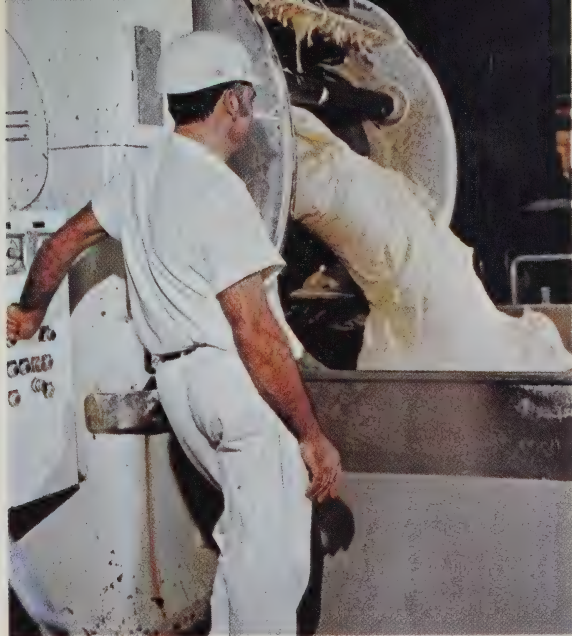
Combine assembly line at a plant in Brantford, Ont.

trade union to conclude a collective agreement covering wages and other terms of employment. Except in Quebec, a representative labour relations board is responsible for the certification of a trade union as the exclusive bargaining agent for a unit of employees. In Quebec, certification functions are performed by special officers of the Department of Labour and Manpower and there is provision for appeals to the Labour Court. Unfair practice provisions place limitations on employers and on employees and their unions regarding interference with each other's rights.

Under all the Acts, government conciliation services are available to assist the parties to reach an agreement; a strike or lockout is forbidden while such conciliation is in progress. A collective agreement is binding on the parties covered. While it is in force, strikes are prohibited and disputes must be settled through a grievance procedure and, if necessary, arbitration.

In some provinces certain classes of employees engaged in essential services, such as firemen, police officers, or hospital employees, are forbidden to strike and must submit any unsettled contract disputes to binding arbitration. Both ad hoc and continuing laws have been adopted in a number of jurisdictions to end strikes that are deemed to endanger the public interest.

In most provinces civil servants have collective bargaining rights and the right to negotiate is being extended to members of various professional groups. A number of provinces have enacted legislation adapted to the special characteristics of the construction industry. In several, provision has been made for accreditation of employers' organizations as bargaining agents, a procedure somewhat similar to union certification.



Processing Canadian flour.

Notice of mass lay-offs

Jurisdiction	When notice required	Length of notice	To whom notice given
Federal	50 or more employees dismissed within 4 weeks	50-100 employees: 8 weeks 101-300: 12 weeks more than 300: 16 weeks	Minister of Labour, Department of Manpower and Immigration, and trade union or employee
Nova Scotia	10 or more employees dismissed within 4 weeks	10-99 employees: 8 weeks 100-299: 12 weeks 300 or more: 16 weeks	Minister of Labour and each employee
Quebec	10 or more employees dismissed within 2 months	10-99 employees: 2 months 100-299: 3 months 300 and over: 4 months	Minister of Labour and Manpower
Ontario	50 or more employees dismissed within 4 weeks	50-199 employees: 8 weeks 200-499: 12 weeks 500 or more: 16 weeks	Minister of Labour, trade union, and employee
Manitoba	50 or more employees to be dismissed simultaneously or within 4 weeks	50-100 employees: 8 weeks 101-300: 12 weeks over 300: 16 weeks	Minister of Labour and trade union or employee or posted in establishment

Unemployment Insurance

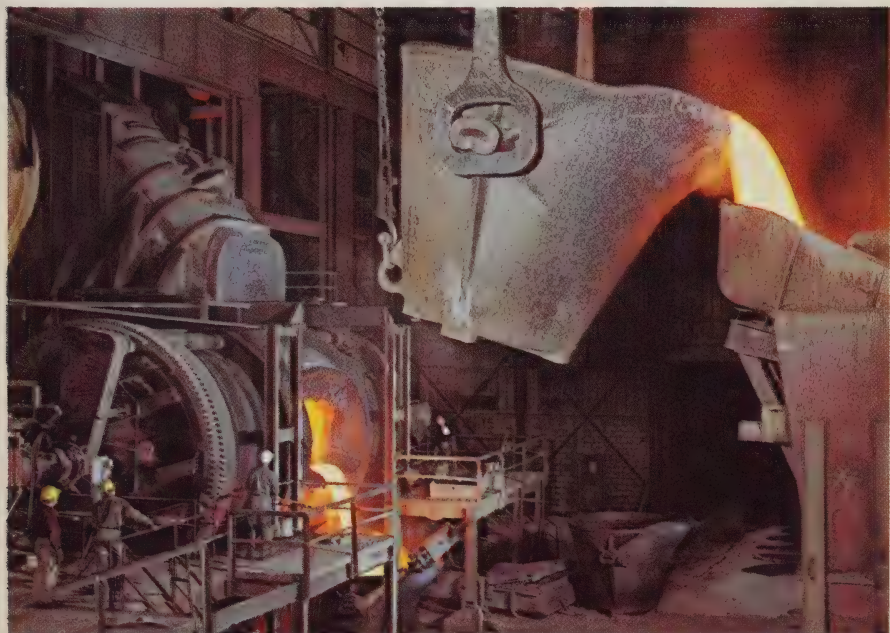
Unemployment Insurance has been part of Canada's life since the Unemployment Insurance Act was passed in 1940. Since that time the basic structure of the Act has remained unaltered. However, various amendments have brought new categories of workers into the plan and contributions and benefit rates have been raised periodically to keep abreast of changing economic conditions.

In 1968, when Parliament approved upward revisions of both contributions and benefit rates, and broadened the scope of coverage, the Unemployment Insurance Commission was instructed to carry out a full-scale investigation of the program and to recommend appropriate changes in approach and structure. The Unemployment Insurance Act of 1971 was the result of extensive studies. Its basic objectives are (1) to provide assistance in coping with an interruption of earnings resulting from unemployment, including unemployment due to illness, and (2) to co-operate with other agencies engaged in social development.

During 1974, benefit payments to recipients under the Act amounted to \$2,119 million.

Under the Unemployment Insurance Act of 1971, coverage is extended to all regular members of the labour force for whom there exists an employer-employee relationship. The only non-insurable employment is that which is remunerated at less than 20 per cent of the maximum weekly insurable earnings or 20 times the

Converter aisle in a copper mine in Murdochville, Que.



provincial hourly minimum wage, whichever is the lesser. The coverage became universal in January 1972. Coverage, contributions and benefit entitlement cease at age 70.

Employers and employees pay for the cost of initial benefits as well as the cost of administration; the employer's rate is 1.4 times the employee's rate. The government's share is confined to the cost of extended benefits as well as the extra cost of initial benefits that are due to a national unemployment rate greater than 4 per cent. There is no fund, and employer and employee contributions are adjusted yearly. The Taxation Branch of the Department of National Revenue started to collect contributions at the beginning of 1972. Persons who did not contribute formerly, either because of their occupation or by virtue of being over the salary ceiling, will pay a preferred rate for the first three years. For those who had been excluded because of their occupation the preferred rate is portable. However, in the case of persons formerly excluded because of the salary ceiling, the preferred rate continues only so long as the employee remains with the employer he had on January 2, 1972. An experience-rating formula for employers may be introduced to reflect the additional expense of benefits generated by large employers who have laid off more than an average number of employees.

The duration of benefit under the new program is not determined solely by the length of time a person has worked. A claimant can draw to a maximum of 51 weeks depending on his employment history and the prevailing economic conditions, provided that (1) he has at least eight weeks of contributions in the last 52 and (2) he has been available, capable and searching for work. Persons with 20 or more weeks of insured earnings (called a "major labour force attachment") are eligible for a wider range of benefits that includes a pre-payment of three weeks of regular benefit for work-shortage lay-offs; benefit payments when the interruption of earnings is caused by illness or pregnancy; and three weeks retirement benefit for older workers. A claimant is not entitled to be paid benefit until he has served a two-week waiting period that begins with a week of unemployment for which benefits would otherwise be payable.

Sickness benefits are available up to a maximum of 15 weeks for persons with major labour force attachment who have suffered an interruption of earnings due to illness, injury, or quarantine (excluding Workmen's Compensation). If a person becomes ill while receiving unemployment benefits, sickness benefits are available, but the combined duration of benefits during the initial benefit period cannot exceed 15 weeks. Maternity benefits are available for eight weeks before confinement, the week of confinement, and six weeks after, to women who have had a major labour force attachment. They must also have been part of the labour force at least 10 of the 20 weeks prior to the 30th week before the expected date of confinement.

Retirement benefit is available for three weeks. It is paid in a lump sum to major attachment claimants who are 70 years of age or over or to whom a retirement pension has become payable under the Canada Pension Plan or Quebec Pension Plan. In the case of those over 70, the application must be within 32 weeks of the 70th birthday as employment weeks are no longer earned after that time. Retirement benefit is paid without a waiting period and without regard to earnings or availability.



Filament yarn is textured, dyed and coned in an Ontario plant for shipment to knitters and weavers.

The benefit rate for all claims will be two thirds of a person's average insured earnings in the qualifying period, to a maximum in 1975 of \$123 per week and with a minimum of \$20 per week. For claimants (with dependents), whose average qualifying earnings are equal to or less than one third of the maximum weekly insurable earnings (\$185 in 1975), the benefit rate is 75 per cent. During the later stages of benefit all claimants with dependents draw benefit at 75 per cent of qualifying earnings, subject to the \$123 maximum. The maximum insurable earnings and therefore the maximum benefit are subject to annual adjustment based on an index calculated from earnings of Canadian employees.

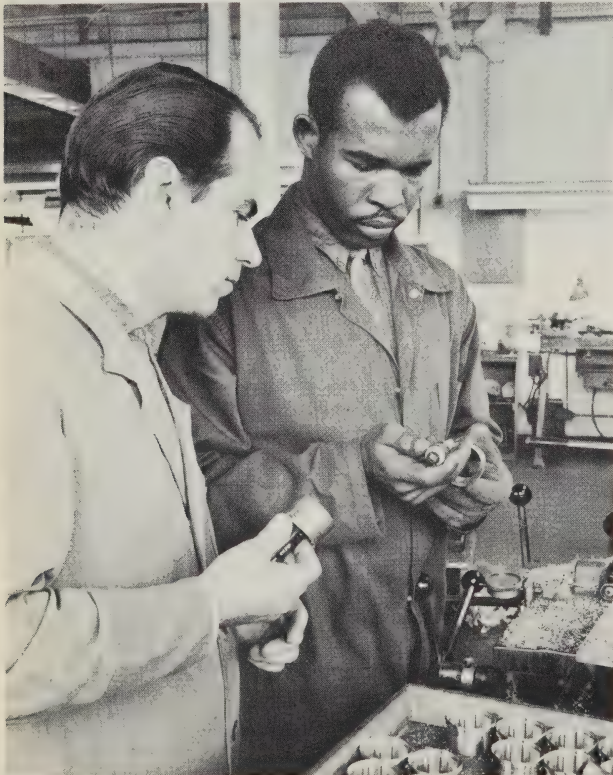
Income from employment in excess of 25 per cent of the benefit rate is deducted from the benefits payable. In the case of sickness and maternity, proceeds of wage-loss plans are not deducted from unemployment benefits during the waiting period but are deducted afterwards. All work-related income is deducted both during the waiting period and after the waiting period has been served.

Manpower

The Department of Manpower and Immigration strives to provide the best possible manpower services to all Canadians, whether native born or landed immigrant. More than 3,000 counsellors in 423 Canada Manpower Centres across the country help people find employment and employers find efficient workers.

In 1974 the "self help" method of matching jobs to workers was stepped up with the Job Information Centre or Job Bank, providing a rapid service for the job-ready client and leaving more counsellors free to help clients with special needs. The Job Information Centre is a modernized system for receiving, distributing and controlling job orders. Daily updated job vacancy lists are displayed in "job banks." Clients can study these wall-mounted lists, select a job that interests them, and discuss it with a Canada Manpower counsellor. If the counsellor is satisfied that the worker is suitable and meets the employer's requirements, an interview is arranged with the employer.

Short-term courses offered by the Dept. of Manpower and Immigration enable workers to develop additional job skills.



Over the next several years, the process of job matching will be improved by the progressive conversion to a computer system.

Services for Employers

The Department provides a variety of services designed to help employers obtain, train and make the most efficient use of qualified employees. Plants and industries affected by large-scale modernization and technological change, are assisted through the Canada Manpower Consultative Service (CMCS) in overcoming the resulting adjustment problems of management and labour. The Canada Manpower Adjustment Program, administered by CMCS, acts as a catalyst to bring employers and workers together to discuss changes and to formulate measures for solving any resulting problems.

Canada Manpower counsellors familiarize themselves with employers' requirements through personal visits to employers, personnel directors, plant superintendents and foremen. During the 1973-74 fiscal year, 210,852 such visits were made.

Under Canada Manpower Mobility Incentive Agreements, the Department pays up to one half of employers' costs involved in moving displaced employees to branch plants, or to employment arranged by the employer at another company location in Canada.

The Canada Manpower Industrial Training Program (CMITP) is an employer incentive program designed to stimulate the Canadian economy, reduce unemployment and improve productivity. CMITP brings together three former programs: Training-In-Industry, Training-on-the-Job for Skill Shortages and Training-on-the-Job for the Disadvantaged. Canadian business and industry is thus encouraged to expand and improve their employee training programs.

Employers are urged to hire and train new workers in anticipation of future needs, and to benefit from the more comprehensive recruitment and counselling services provided by the country-wide network of Canada Manpower Centres. From coast to coast the CMCs are linked by a telecommunications system to facilitate a continuous flow of labour market information.

Services for Employees

Under the Canada Manpower Training Program, workers lacking occupational skills may be referred by a CMC counsellor to adult training courses. Persons who have been out of school for any 12-month period and are at least one year past the school-leaving age of the province in which they reside are eligible for courses and training allowances.

The Canada Manpower Mobility Program provides grants for persons to leave a region where there is little or no possibility of finding suitable employment to take pre-arranged jobs or occupational training in other locations.

The Department is actively trying to eliminate discrimination faced by women, youth and native people seeking employment. Special employment programs are also conducted for students, older workers, retiring members of the Armed Forces and seasonal workers. In addition, there are services for disadvantaged clients who



Hamilton, Ont.

want to work but whose needs extend beyond the present range of departmental counselling, training, mobility and placement. Diagnostic and special counselling services have been purchased from provincially approved agencies to help identify clients requiring outside help. Short-term training courses purchased under the Work Adjustment Training Program enable persons lacking work experience and self-confidence to develop their work talents.

Basic Job Readiness Training is an upgrading program to prepare functionally illiterate adults for employment, occupational training or training on the job.

The Local Initiatives Program (LIP) and Opportunities for Youth (OFY) are special programs, implemented when seasonal unemployment reaches an unacceptable level. LIP invites Canadians to initiate and establish job-creating projects that will benefit the community. OFY is similarly structured, enabling students to initiate summer projects that will create jobs and contribute to the betterment of community life. Federal funds are available in both LIP and OFY to pay salaries and some overhead expenses of project workers.

The Local Employment Assistance Program (LEAP) assists the hard-core unemployed to become conditioned to work, gain self-confidence, and establish a work history. Individual projects under LEAP may last for two or three years.

To help persons who have no access to normal manpower services and programs, the Department has developed an Outreach Program which provides either additional personnel to extend special services, or financial support for projects established by outside organizations. Canada Manpower Centres are co-ordinated by five regional offices in Halifax, Montreal, Toronto, Winnipeg and Vancouver. All manpower programs and services are implemented through these field offices.

Regional Economic Expansion

The Department of Regional Economic Expansion was formed in April 1969 to carry out, in co-operation with the provinces, a co-ordinated effort to reduce regional economic disparities in Canada. The programs that the Department administers are of a long-term nature, in recognition of the fact that regional disparities are not new and, by their very nature, cannot be resolved in a short time. The Department's strategy is composed of three major and closely-related activities: industrial incentives, infrastructure assistance, and social adjustment and rural development.

Early in 1972 the Department undertook a comprehensive review and analysis of its programs and organization. As a result, it was decided to decentralize the organization and at the same time to negotiate general development agreements with each province. These agreements (GDAs) are a legal framework whereby closer co-operation between the provincial and federal governments in the field of development is made possible. Subsequent subsidiary agreements to exploit specific development opportunities will be signed as needed. Existing agreements will be continued and integrated as experience dictates.

To facilitate this closer co-operation, four regional offices at Moncton, Montreal, Toronto and Saskatoon were established to handle most of the planning and implementation of programs previously handled in Ottawa. There are also provincial offices in each capital and branch offices in Bathurst, Rimouski and Thunder Bay.

The objective of the industrial incentives program is to create continuing productive employment by making investment in viable industry more attractive in the regions of the country where growth has been relatively slow. The Regional Development Incentives Act of June 1969 (amended December 1970) provides for a system of grants and loan guarantees to private industry to locate, expand, or modernize their operations in certain designated regions in all the provinces.

Infrastructure assistance previously available under the Special Areas program has been absorbed into the GDA process; the designation of areas for this purpose has been allowed to lapse. However, the Renfrew-Pembroke, Ont. region and the Kootenay region of BC continued to be eligible for assistance under the Regional Development Incentives Act until December 31, 1975.

The Department's efforts to facilitate social adjustment and rural development take several forms. Under the Agricultural and Rural Development Act, the Fund for Rural Economic Development Act, the Prairie Farm Rehabilitation Act, the Newfoundland Resettlement Agreement and other federal-provincial agreements programs are designed to attack the social and human problems that slow growth over the decades has inevitably brought. The aim is to facilitate the access of people in rural areas to employment opportunities, as well as to improve their incomes through a more efficient use of rural resources. Departmental and provincial planners work together to identify further measures that can be taken to overcome the persistent problems of regional economic disparities.

Urban Affairs

The Ministry of State for Urban Affairs (MSUA) was created by proclamation June 30, 1971, as a key element in the federal government's response to the challenge of rapidly accelerating urbanization.

The Ministry is a policy agency designed specifically to plan, develop, foster and co-ordinate policies and programs through which the federal government can exert a beneficial influence on Canada's urban centres, in close co-operation with other levels of government and with non-governmental groups. In addition, policy-making for urban Canada is concerned with injecting urban considerations into the development and implementation of other federal policies and programs and with fostering intergovernmental relationships to promote the co-ordination of urban policies and programs.

The Ministry is actively involved in several areas:

Urban Economy. It is developing policy alternatives and program proposals for urban public finance, suggesting alternative ways of financing urban expansion in Canada, and participating in a tri-level examination of public finance.

Urban Land and Space. The Ministry is developing policy on the use of federal land holdings and is participating in its implementation. Federal land management policy is designed to harmonize planning and use of federal lands with the development goals and strategies of local communities and regions, wherever possible. It is also investigating the implications of the ever-increasing consumption of

Winnipeg's new Convention Centre.



land peripheral to urban centres. The Ministry is co-operating with other departments and governments to determine appropriate policies to ensure that the scarce land resource is preserved and that, at the same time, the benefits of urbanization are maximized.

Urban Transportation. It has developed and recommended urban transportation policies, including the National Urban Transportation Development Corporation and the railway relocation program, and is participating in implementation of the latter, under an Act passed in June 1974.

MSUA is also co-operating with the Ministry of Transport in its examination of the National Transportation Act; it is offering advice on the impact of urban-city transportation policies, on the national urban patterns and on metropolitan growth rates.

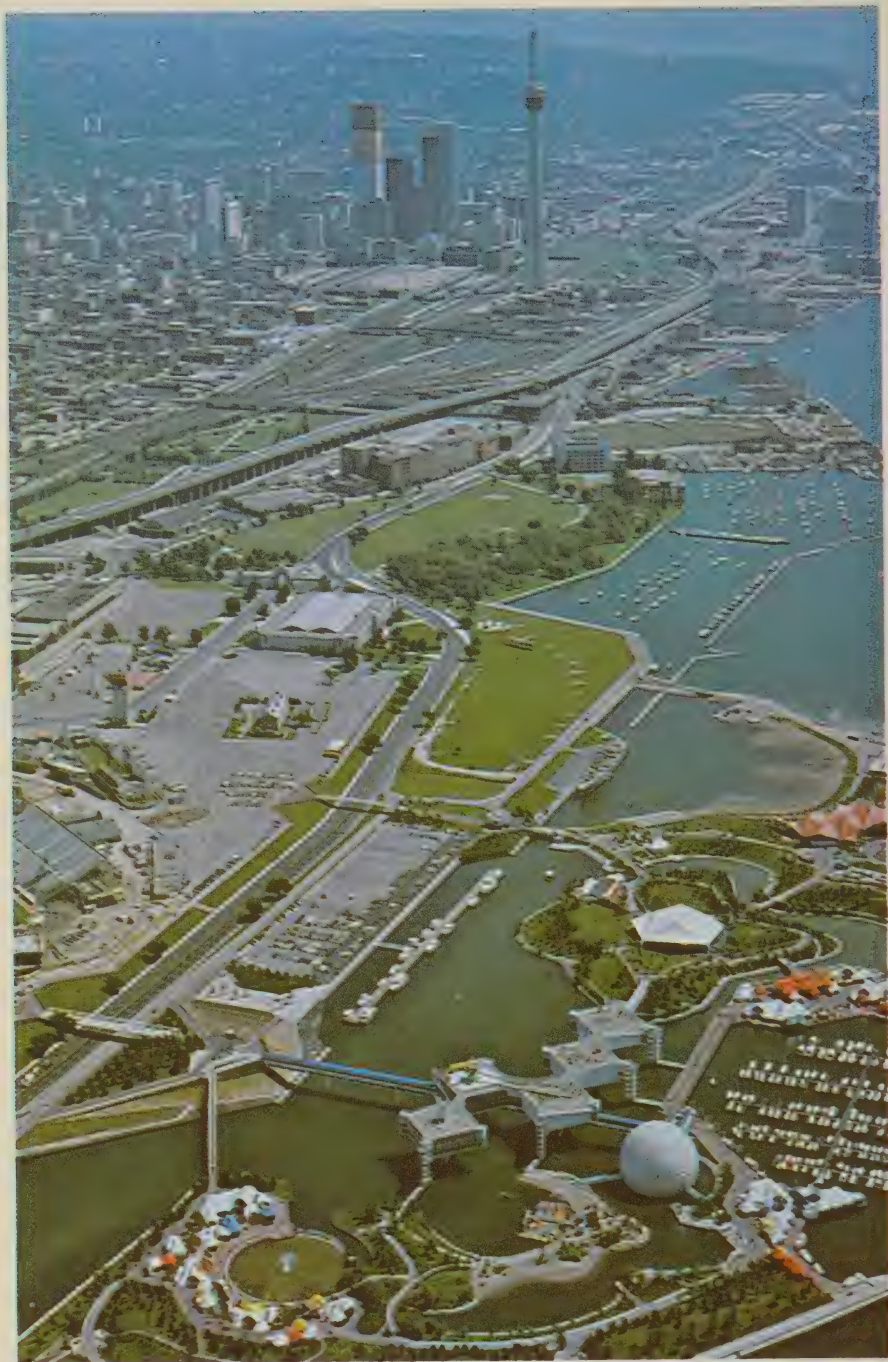
Under the provisions of the Railway Relocation and Crossing Act the federal government has the power to expropriate railway land, allowing cities and towns to get on with planned urban redevelopment. The program applies particularly to cities where railway facilities — tracks, yards, terminals — are obstacles to the planned redevelopment of the community. Part I of the Act permits the Ministry of State for Urban Affairs to financially support urban planning in connection with relocation and rerouting proposed by provinces and municipalities so that improved community services and facilities can be developed.

Urban Environment. The Ministry is developing and recommending federal policies and programs to influence the form and quality of Canadian cities. It is developing plans and projects for the imaginative use of federal lands and properties as instruments for urban change and is participating in their implementation. Other efforts involve the study of conditions in the inner city areas and the preparation of a federal view on a new communities strategy, to accommodate anticipated urban growth.

Urban Information. The Ministry is developing and recommending policies and programs to improve the quality of urban statistics to provide a more complete basis for assessing the impact of federal programs on urbanization and urban areas, and for the initiation of new policy and program thrusts.

Urban Planning and Interventions. The preparation of regional plans and strategies by the provinces to guide the development of Canadian urban regions is being supported. Examples are regional planning for Vancouver, Winnipeg, Halifax—Dartmouth, Quebec City and other centres.

Urban Institutions. The Ministry is actively reviewing the relationship between the existence of three sets of governmental institutions with jurisdictional responsibilities in urban Canada and the complexity of the broad issue of urban growth management. This involves the development of tri-level consultation mechanisms, the analysis of the capacities and resources of units of local government to be used in growth management issues, as well as consideration of how the federal government might, through the provinces, increase the effectiveness of local governments in this regard.



Toronto, Ont.

Veterans Affairs

The Department of Veterans Affairs (DVA) and the four agencies associated with it — Canadian Pension Commission, Pension Review Board, War Veterans Allowance Board and Bureau of Pensions Advocates — administer a continuing program of assistance to nearly a million Canadian veterans. Among these services are medical treatment, welfare counselling and assistance, pensions and war veterans' allowances, and educational assistance to children of the war dead.

March 31, 1975, was the final date for the acceptance of loan applications from qualified veterans of World War II or the Korean Special Force for settlement under the full- or part-time farming provision of the Veterans' Land Act. Since the Act was passed in 1942, loans and grants totalling almost \$1,300 million have been made to 138,756 veterans. Of these, nearly 60,000 have subsisting purchase contracts representing repayable principal indebtedness of approximately \$555 million. Within the maximum loan ceilings specified in the Act, these veterans may apply for additional assistance up to March 31, 1977.

The Department's treatment services extended care to more than 27,000 veterans during the 1974-75 fiscal year. In 1974, two hospitals were transferred from the Department to provincial jurisdiction, leaving a total of six hospitals and three veterans' homes for the Department to administer.

A complete guide to the memorials to Canada's war dead from two world wars, *Silent Witnesses* (and the French version *Témoins silencieux*), by Herbert Fairlie Wood and John Swettenham, was published in 1974 with the aid of funds provided by the Department of Veterans Affairs and the National Museum of Man. The book contains maps, guides to the locations of cemeteries and a wealth of photographs, and is the only full account of Canada's commemoration of its fallen servicemen and servicewomen.

The Canadian Pension Commission administers the Pension Act which provides compensation in respect of members of the Canadian Forces who have been disabled or who have died as a result of military service, and to their families. During the year ending March 31, 1975, there were 118,120 pensions being paid to veterans and 27,357 to their dependents. The Pension Act provides that pensions be paid in accordance with the extent of the disability. As of January 1, 1975, the basic rate of pension for a single pensioner whose disability is assessed at 100 per cent is \$460.50 a month. Additional pension for a wife and child would bring this amount to \$635.55.

The Pension Review Board is the final binding judicial authority on pension entitlement, amount of awards and interpretation of the provisions of the Pension Act. During the year, the Board received 548 appeals and heard 477 claims dealing with pension entitlement and increase in assessment concerning 673 different disabilities.

The Bureau of Pensions Advocates provides counsel and free legal aid to pension applicants in the preparation and presentation of their pension claims. The relationship between the Bureau and applicant or pensioner is that of a solicitor and client. The Bureau submitted 7,480 claims to the Canadian Pension Commission under various sections of the Pension Act during 1974-75. Pensions Advocates also



The War Memorial in Ottawa, Ont.

presented 2,126 cases at Entitlement Board and Quantum Hearings during the year. Specialist advocates of the Bureau staff at head office made 427 submissions to the Pension Review Board, which is the final court of appeal under the Pension Act.

The War Veterans Allowance Act was designed to provide an allowance for veterans who, because of the rigours of theatre-of-war service, were deemed to be "pre-aged" and thus were unable to support themselves and their families. Widows and orphans of such veterans may also benefit under the terms of the Act. Similar benefits are available under Part XI of the Civilian War Pensions and Allowances Act to civilians who served in close support of the Armed Forces and performed meritorious service. Since April 1, 1974, the allowance paid on behalf of a child of a widow, widower or unmarried veteran or an allowance paid to an orphan is continued to age 25 as long as the child or orphan continues his education; otherwise, the allowance is discontinued at age 17. Since October 1, 1974, the legislation has provided for the payment of an additional monthly allowance, less Family Allowance, for each dependent child (after the first one) of a widow, widower or unmarried veteran and for each dependent child of all other recipients. The War Veterans Allowance and the Civilian War Allowance programs are administered by the War Veterans Allowance Board, a quasi-judicial body. During the fiscal year 1974-75, nearly \$144 million in allowances were paid to some 87,000 recipients.

Social Welfare

The federal, provincial and local governments provide a wide range of publicly funded and administered income security and social services programs. The majority of these programs fall under the authority of the Department of National Health and Welfare which administers the Canada Pension Plan, the Old Age Security Pension, the Guaranteed Income Supplement, Family Allowances and the Canada Assistance Plan. The Unemployment Insurance Commission, the Department of Veterans Affairs and the Department of Indian Affairs and Northern Development also play an important role in the field of social security. The provincial governments and, by delegation, the municipalities, have prime responsibility for the administration of social assistance and welfare services to persons in need. These services and the assistance provided by all levels of government are complemented by the activities of voluntary agencies.

The Canada Pension Plan

The Canada Pension Plan (CPP) and its counterpart, the Quebec Pension Plan (QPP), constitute a nation-wide, mandatory, portable, contributory plan for virtually all paid members of the work force (both employees and self-employed persons) between the ages of 18 and 70. Under this plan, millions of members of the work force acquire and retain, during their productive years, protection for themselves and their families against loss of income due to retirement, disability or death, regardless of their location in Canada. It is an earnings-related scheme which pays, to eligible applicants, retirement pensions, disability pensions, pensions for surviving spouses, orphan's benefits, benefits for the children of disabled contributors and a lump-sum death benefit. Contributions made by employees amount to 1.8 per cent of pensionable earnings (\$700 to \$7,400 in 1975) which is matched by the employers. Self-employed persons contribute 3.6 per cent on the same range of earnings.

Between 1966 and 1973, the annual cost of living increase paid to CPP beneficiaries was limited to 2 per cent per year. Since the beginning of 1974, all CPP benefits are adjusted annually to reflect full cost of living increases.

In January 1975, amendments to the Canada Pension Plan provided for many changes, some of them being equal treatment of male and female contributors and beneficiaries, removal of the retirement and earnings test for persons aged 65 and over and the changing of the basic exemption level of pensionable earnings from 12 per cent to 10 per cent. A new formula for determining the yearly earnings ceiling of the Plan, called the Year's Maximum Pensionable Earnings (YMPE) was introduced in the legislation. The new formula provides that the YMPE (the amount up to which a person may contribute) will be increased by 12½ per cent each year until it reaches the average earnings of Canadian workers as published by Statistics Canada.

Old Age Security and Guaranteed Income Supplement

An Old Age Security (OAS) pension is payable to all persons 65 years of age and

over who meet the residence requirements of 10 consecutive years of residence in Canada including the year immediately preceding the approval of the application. The pension is also payable to persons aged 65 with 40 years of residence in Canada since age 18, regardless of their location of residence.

In 1966, an amendment to the OAS Act provided for the payment of a Guaranteed Income Supplement (GIS). The maximum monthly supplement may be paid to pensioners whose only income is the OAS pension and a partial supplement may be paid to those with other income.

In January 1975, the monthly OAS pension stood at \$120.06 and the maximum monthly GIS at \$84.21. For a married pensioner whose spouse was also receiving the OAS, the maximum monthly GIS for each was \$74.79. Both the OAS and maximum GIS are adjusted every quarter year to reflect the increases in the Consumer Price Index.

The Old Age Security program is administered by the Department of National Health and Welfare through regional offices located in each provincial capital at which applications for pensions are received. The regional office in Edmonton, Alta. administers the program for residents of the Yukon Territory and the Northwest Territories.





Day-care centres in Canada are licensed and must meet certain standards.

Family Allowances

The Family Allowances Act, 1973, which came into effect on January 1, 1974, provides for the payment of a monthly family allowance on behalf of a dependent child under 18 years of age who is resident in Canada and is maintained by a Canadian citizen or landed immigrant resident in Canada. In special cases, the child or parent need not be resident in Canada, or the parent may be a non-immigrant admitted to Canada. The allowance, which is normally paid to the mother of the child, is taxable and must be included as income by the person who claims the child as a dependent.

A monthly, non-taxable Special Allowance is payable on behalf of a child under the age of 18 who is in the care of, and maintained by, a government, a government agency or an approved private institution. The Special Allowance may also be paid to the child's foster parent at the request of the institution.

In 1974, the monthly Family and Special Allowances were \$20 and, in 1975, \$22.08. Both allowances are increased at the beginning of each year whenever an index based on the Consumer Price Index for Canada increases. The rates mentioned above do not apply to Quebec and Alberta. These two provinces have chosen to vary their rates by virtue of the Act which permits a provincial legislature to do so, providing certain conditions are met. However, no province may vary the rate of the Special Allowances. In addition, Quebec and Prince Edward Island both have their own family allowances program which supplements those paid by the federal government.

Social Assistance

All provinces have established programs whereby assistance is available to persons in need and their dependents. Under the Canada Assistance Plan, the only eligibility requirement for individuals or families applying for assistance under provincial programs is that of need. Need is determined through an assessment of budgetary requirements, income and resources. However, it is the provinces who define the conditions for eligibility, establish the rates of assistance and set down the procedures enabling an individual to appeal a decision relating to the provision of assistance.

Assistance is the provision of allowances to cover items of basic need such as food, shelter, clothing, fuel, household and personal necessities; special items for the safety, well-being, or rehabilitation of a person in need such as blind and disabled persons whose allowances are now being administered by most provinces under the Canada Assistance Plan; non-insured health care services; and maintenance in a home for special care such as a home for the aged, a nursing home or a child care institution. Welfare services include counselling and assessment, casework, rehabilitation services, community development and day care, homemaker and adoption services which are provided to persons in need or to persons who are likely to become in need if they do not receive these services.



A New Horizons club in St. John's, Nfld.

New Horizons Program

The New Horizons Program for retired Canadians was designed to afford older people the opportunity to participate more actively in community life. Grants for the funding of projects are made available to groups of retired Canadians, usually consisting of 10 or more members. The projects, which must be non-profit in nature and of no commercial benefit to anyone, are related to such fields as physical recreation, crafts and hobbies, historical, cultural and educational programs, social services, information services and activity centres. Between July 1972, when the program was established, and May 14, 1975, 3,836 projects involving 771,264 people were awarded \$21,534,523.

Services for the Aged

In addition to the benefits derived from the New Horizons Program, elderly persons have at their disposal a variety of community services under public and voluntary auspices. These include information, counselling and referral services, friendly visiting and housing registries. Clubs and centres provide recreation and social activities in addition to the usual services. Specially designed low-rental housing projects have also been built for older persons, financed through federal low-interest loans and provincial, municipal and voluntary funds. Institutions for older persons unable to care for themselves are operated under public, voluntary or religious auspices, and include residential and nursing homes.

Special services such as the meals-on-wheels program and the visiting homemaker services are also available to elderly people. Much of the meals-on-wheels program is carried out by volunteers who provide meals to old and handicapped people in their own homes. The visiting homemaker service is an organized community service provided through a voluntary or non-profit organization and is provided by qualified persons, under professional supervision. One of the purposes of the homemaker service is to give assistance to aged persons still capable of some self care.

Child Welfare Services

The term "child welfare services" refers particularly to statutory services for the protection and care of children who are neglected or who are temporarily or permanently without parental care. Such services include protection for children in their own home; care in foster boarding homes or, when necessary, in institutions; adoption services; and services to unmarried parents. Child welfare services are available in all provinces under provincial legislation and the programs are administered by the provincial authorities or by local children's aid societies. These children's aid societies, and the recognized agencies in Quebec, receive substantial provincial grants and, in some cases municipal grants. Some receive support from private subscriptions or from United Appeal funds. The cost of certain services and maintenance costs for children in care of a voluntary or public agency are sharable with the federal government under the Canada Assistance Plan.

Day care centres are operated by local governments, voluntary associations,

charitable organizations or private and commercial auspices. In addition to being licensed, they must meet the standards set by the provincial government and comply with requirements relating to maintenance, safety, transportation and records. The ages of children admitted to day care centres vary from province to province and is determined by the centre within the limits of provincial legislation defining day care.

National Welfare Grants

To help develop and strengthen welfare services in Canada, the federal government provides project grants to provincial and municipal welfare departments, non-governmental welfare agencies, citizen's organizations and universities for demonstration, research, manpower, social action and other projects considered to have national significance. Fellowships are awarded to individuals seeking advanced training in the social welfare field. The variety of provisions within the National Welfare Grants program, with its associated consultative services, allows it to operate as a flexible instrument in the development of welfare services and to give major emphasis to experimental activities in the welfare field.

International Welfare and Social Security

Canada actively participates in the social development activities of the United Nations through its involvement with the Executive Board of UNICEF, the Economic





and Social Council, the General Assembly, the Organization for Economic Co-operation and Development as well as numerous UN seminars and conferences dealing with social policy.

The Department of National Health and Welfare co-operates with the Canadian International Development Agency and, in conjunction with provincial departments and agencies, participates in the work of several international voluntary organizations such as the International Council on Social Welfare and the International Union of Family Organizations. Canadian officials engaged in the field of social security participate in the work of the International Social Security Association and the International Labour Organizations. For some years, Canada has had observer status at meetings of the Inter-American Social Security Association.

Social Security Review

In April 1973, a first meeting of federal and provincial welfare ministers launched an on-going federal-provincial review of Canada's social security system. At that time, five principal strategies dealing with employment, social insurance, income supplementation, social services and federal-provincial relations as they affect the nation's social security system were adopted as a basis for reform. A Continuing Committee on Social Security was established to direct the activities of three federal-provincial working parties on employment, social services and income maintenance.

In February 1975, the ministers directed the working parties to develop a policy framework which would provide for an "income support program" for some categories of unemployed persons and a "work incentive measure" to ensure that those who work would profit more than those receiving income support. The ministers also agreed that a "community employment strategy" was needed to provide employment for those who have difficulty in securing and maintaining employment. Accordingly, 20 projects are being launched across Canada.

the economy

Economic Growth in 1974

Canada's Gross National Product (GNP) in 1974 was \$140,900 million, 17.0 per cent higher than in 1973. The economy's growth in real terms (1971 dollars) was only 2.8 per cent after real growth rates of 6.9 per cent in 1973, 6.0 per cent in 1972 and 5.7 per cent in 1971. Employment increased by an above-average 4.3 per cent in 1974, after the record-breaking increase of 5.2 per cent in 1973. Prices continued to escalate rapidly. The implicit price index for Gross National Expenditure rose by 13.8 per cent after an increase of 8.4 per cent in 1973. The 1974 increase is the largest on record, outranking that of 1951, when pressures associated with the Korean war sent the index up 11.5 per cent, and that of 1948 when prices rose by 12.2 per cent because of postwar reconversion.

Most income and expenditure components showed remarkable increases, labour income, 16.9 per cent, corporation profits, 27.2 per cent, interest and miscellaneous investment income, 33.1 per cent, accrued net income of farm operators from farm production, 19.0 per cent, consumer expenditures on goods and services, 15.2 per cent, government current expenditure on goods and services, 20.6 per cent, business expenditures on plant and equipment, 23.4 per cent, exports of goods and

services, 25.4 per cent, and imports on goods and services, 31.2 per cent. However, such increases largely reflected the current rate of inflation. A trade deficit of \$2,187 million was the largest on record.

In real terms, the weakness in the external sector of the economy offset much of the strength in the domestic sector. Final domestic demand increased by 5.2 per cent in 1974, a deceleration from the 1973 growth rate of 7.5 per cent, but in line with the average rate of growth over the past 25 years.

Consumer Outlays

Current dollar consumer expenditure increased more than 15 per cent in 1974; prices grew by 10.5 per cent. The real increase of 4.2 per cent in 1974 followed increases of 7.5 per cent in 1973, 6.6 per cent in 1972 and 5.7 per cent in 1971.

Consumer spending on durables increased by 5.0 per cent in real terms, after a 15.6 per cent rate of increase in 1973. This sharp deceleration was because of a decline in sales of new passenger cars, and weakness in residential construction; sales of furniture and appliances slowed from 1973. Spending on semi-durables increased by 7.1 per cent in real terms, and the over-all deceleration from 11.5 per cent in 1973 was widely distributed among the components. Sales of non-durables increased by 4.9 per cent in real terms compared to 5.7 per cent in 1973; expenditures on food (the largest component) increased at the same rate as in 1973, while alcoholic beverages, gasoline and oil showed a deceleration. Real consumer spending on services increased 2.2 per cent in 1974.

All major components of consumer expenditure experienced sharper price rises in 1974 than in 1973, but price increases were particularly strong in durable and semi-durable goods.

Investment

Real gross fixed capital formation was strong in 1974, despite a decline in the rate of investment in residential construction. Virtually all of the increase was due to expansion of business plants and equipment, which continued the vigour of 1973 following six years of relatively weak investment. A steep 15.7 per cent price increase was almost double the 1973 rate of 8.5 per cent. The year-to-year changes in the components of business capital formation, in real terms, were as follows: residential construction, down 2.6 per cent, non-residential construction, up 7.6 per cent, machinery and equipment, up 8.1 per cent. Although residential construction was only about 5 per cent of total real Gross National Expenditure in 1974, its modest increase, after 8.8 per cent growth in 1973, figured strongly in the slower growth in final domestic demand.

There was a sharp rise in non-farm business inventory investment, from \$1,081 million in 1973 to \$2,669 million in 1974. Both manufacturing and wholesale trade displayed strong increases.

The External Sector

The trade deficit stood at \$2,187 million in 1974, up from \$319 million in 1973. The deterioration was mainly attributable to the balance on goods, which fell from a



Edmonton's new oil refinery on the North Saskatchewan River, Alta.

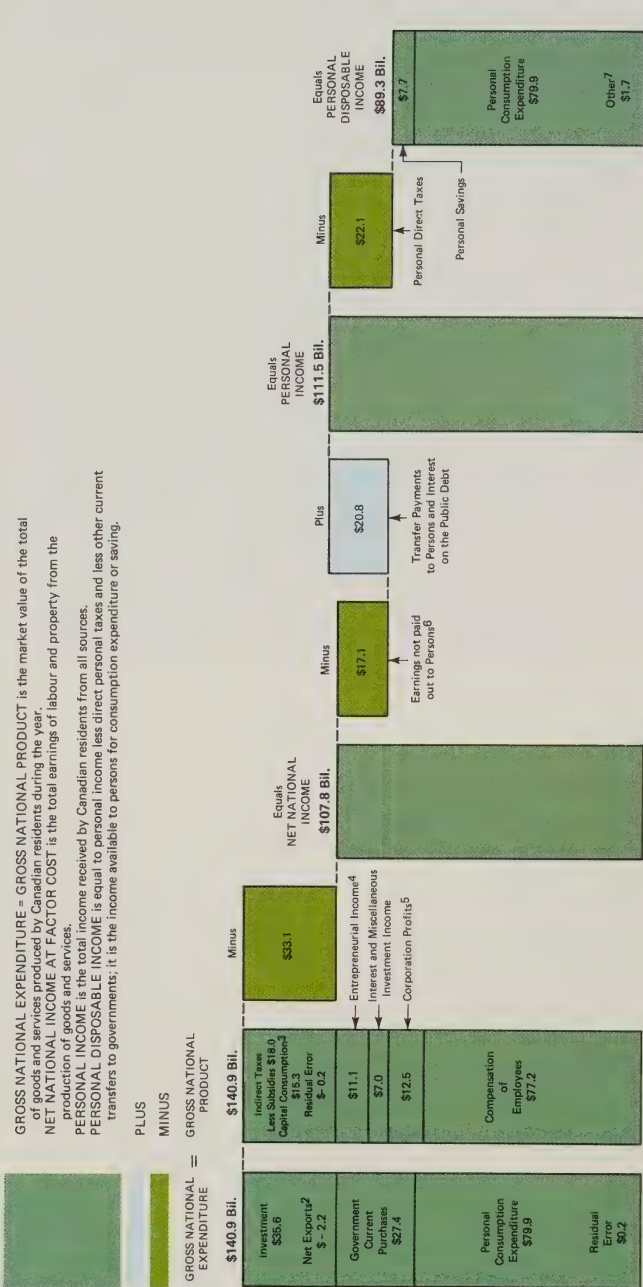
surplus of \$2,720 million to \$1,519 million. The deficit on services increased from \$3,039 million to \$3,706 million.

Export prices rose by 30 per cent in 1974, due to very sharp increases in the prices of wheat, petroleum and natural gas, woodpulp and newsprint, all metals and final manufactured goods. The increase of about 21 per cent in import prices is accounted for by strong price rises in food, petroleum, chemicals, metals and by relatively strong increases in final manufactured products. In real terms, exports declined by 3.8 per cent. This decline was due to decreased exports of food, petroleum, lumber and auto parts, which were partially offset by increases in exports of woodpulp, newsprint, iron and steel, machinery and equipment, and motor vehicles. Constant dollar imports were up 8.6 per cent in 1974 due to increases in all major categories of manufactured goods. There was a decline in petroleum imports.

Incomes

Labour income increased by 16.9 per cent in 1974, the largest annual rate of growth since 1951, and compared with an increase of 13.4 per cent in 1973. The

Relation between Gross National Product, Net National Income¹ at Factor Cost, Personal Income, Personal Disposable Income and Personal Net Saving, 1974



1 At factor cost, i.e., at the cost of labour and capital used.
 2 Exports valued at \$36,488 million minus imports of \$40,675 million.
 3 And miscellaneous valuation adjustments.
 4 Includes accrued net income of farm operators from farm production and net income of non-farm unincorporated business.

5 Including inventory valuation adjustment and minus dividends paid to non-residents.
 6 Consists mainly of undistributed corporation profits, corporate profit taxes and government investment income.
 7 Interest on consumer debt and personal remittances to non-residents.
 Some columns may not add due to rounding.

acceleration resulted largely from increases in average earnings. In 1974, the estimates were particularly affected by both a record number of man-days lost due to industrial disputes and record levels of retroactive wage payments and lump sum cost-of-living allowances.

Wages and salaries in the goods-producing industries advanced by 14.6 per cent in 1974, after an increase of 13.2 per cent in 1973. Within the goods-producing industries, wages and salaries in manufacturing and construction rose by similar rates, mainly reflecting significant increases in average earnings. Wages and salaries in the service-producing industries rose by 17.7 per cent in 1974, compared with an increase of 12.8 per cent in 1973, in line with sharp gains in average earnings. The rate of increase accelerated notably in all industry groupings. The large retroactive payments and cost-of-living allowances in 1974 particularly affected the rates of increase in the transportation, communication and other utilities industries (18.2 per cent), service-producing industries (17.0 per cent) and public administration industries (18.6 per cent).

The annual increase of 27.2 per cent in corporation profits, although down from the 34.4 per cent increase recorded in 1973, was still substantial. Profits in mining, manufacturing and trade all showed notable increases. Within manufacturing, the sharpest increases took place in the textile, paper, primary metals, metal fabricating, machinery, chemical, and petroleum and coal industries.

The inventory valuation adjustment, intended to remove from income those profits which do not reflect current production, increased from \$2,384 million in 1973 to \$4,264 million in 1974.

Accrued net income of farm operators from farm production rose by 19.0 per cent

A grocery store in the Town Centre, Churchill Falls, Nfld.

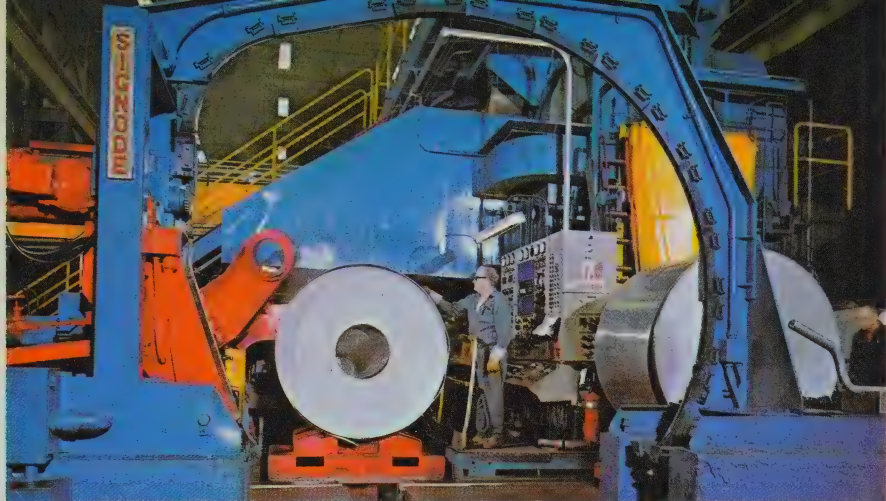


Sources of personal income (million dollars)

Source	1950	1960	1970	1973	1974
Wages, salaries and supplementary labour income	8,998	19,582	46,706	64,961	75,970
Military pay and allowances	154	559	914	1,092	1,185
Net income received by farm operators from farm production	1,165	1,023	1,119	3,127	3,204
Net income of non-farm unincorporated business including rent	1,882	3,192	5,424	6,907	7,345
Interest, dividends and miscellaneous investment income	983	2,029	5,220	7,775	9,570
Current transfers:					
From government					
Transfer payments to persons	1,023	3,090	6,985	11,200	13,715
Capital assistance	2	9	10	44	54
From corporations					
Charitable and other contributions and bad debt	40	81	148	178	209
From non-residents	15	30	107	203	217
Personal income	14,262	29,595	66,633	95,487	111,469

Disposition of personal income (million dollars)

Disposition	1950	1960	1970	1973	1974
Personal expenditure on consumer goods and services:					
Durable goods	1,576	3,236	6,799	10,588	12,103
Semi-durable goods	2,162	3,577	6,645	9,497	11,267
Non-durable goods	4,896	9,002	16,186	22,521	26,629
Services	3,848	9,664	20,697	26,721	29,911
Total personal expenditure on consumer goods and services	12,482	25,479	50,327	69,367	79,910
Current transfers:					
To government					
Income taxes	612	1,979	8,811	13,308	16,177
Succession duties and estate taxes	66	158	266	205	178
Employer and employee contributions to social insurance and government pension funds	237	657	2,470	3,551	4,467
Other transfers	62	234	1,077	1,062	1,108
Total transfers to government	977	3,028	12,624	18,126	21,930
To corporations	29	123	641	997	1,493
To non-residents	36	98	169	234	224
Personal savings	738	867	2,872	6,763	7,712
Personal income	14,262	29,595	66,633	95,487	111,469
Personal disposable income (personal income less transfers to government)	13,285	26,567	54,009	77,361	89,339



A coil of aluminum sheet emerging from the winding machine at a plant in Kingston, Ont.

in 1974, a sharp drop from the extraordinarily high rate of increase in 1973. The value of grain production, as in 1973, increased sharply, reflecting a further rise in prices, and was the main contributor to the total increase. Cash receipts from the sale of dairy products, fruits, vegetables and eggs, and government subsidy payments also rose sharply. The value of livestock production decreased slightly as prices levelled off or declined. Farm operating expenses increased at about the same rate as in 1973, further dampening the increase in farm income.

The rise in interest and miscellaneous investment income of 33.1 per cent was due mainly to higher government royalties.

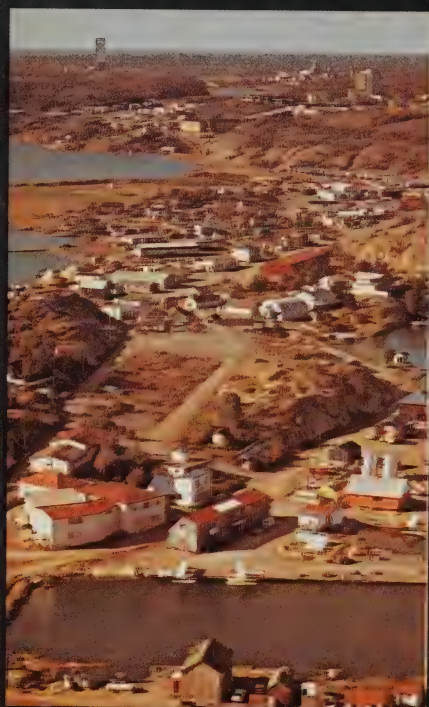
The Government Sector

Total expenditures of all levels of government combined, excluding inter-governmental transfers, rose by 23.5 per cent in 1974. More than half of the increase took place in spending on current and capital goods and services. Current outlays on goods and services rose by 20.6 per cent spread about equally at the federal, provincial and local levels. Transfer payments to persons increased by 22.5 per cent, particularly at the federal level where higher rates led to a \$1,000 million increase in family and youth allowances. Subsidies were more than doubled, mainly at the federal level and largely reflecting the introduction of payments to importers of crude oil and petroleum products and higher payments to the railways.

Total revenues of all levels of government combined increased by 25 per cent. Reflecting the rise in personal income, personal direct taxes rose by 23 per cent. Indirect taxes rose by an amount similar to the rise in personal direct taxes. Almost half of the increase resulted from revenues collected under the oil export tax and charge. All other revenue categories registered gains. Corporate direct taxes rose by 36 per cent, in line with the sharp increase in corporation profits. The 25 per cent increase in investment income was due largely to a sharp increase in royalties. As a result of revenues rising more sharply than expenditures, the surplus, on a National Accounts basis, of the government sector as a whole increased from \$1,193 million in 1973 to \$1,928 million in 1974.



1



2

1. Montreal, Que.
2. Yellowknife, NWT.
3. Charlottetown, PEI.
4. Vancouver, BC.



3



Natural Resources

Agriculture

Although Canada is largely an urban and industrial nation, agriculture remains an important part of the economy, accounting for about 30 per cent of the activity in the primary industry sector.

The total investment in agriculture exceeds \$29,000 million, with about 69 per cent of it in real estate, 15 per cent in machinery and equipment, and 16 per cent in livestock. Canada is one of the world's major exporters of farm products and in 1974 the value of Canadian agricultural exports amounted to more than \$3,810 million. Farm products represented approximately 12 per cent of the country's total exports in 1974.

With industrial development providing alternative employment opportunities and with increasing mechanization of farm operations, the number of farm workers has been declining in the past few decades. From 681,000 in 1961, for example, the number has dropped to an estimated 473,000 in 1974. This has been accompanied by a decline in the number of farms which, in the 1961-74 period, dropped from 480,903 to an estimated 327,490.

Although the numbers of workers and farms have been declining, the total production of food has been increasing steadily. Since 1961, agricultural productivity, on a per-worker basis, has increased by 100 per cent compared with a gain of 40 per cent for commercial non-agricultural industries.

Family farms dominate the agricultural picture in Canada. A relatively small proportion of these are incorporated or operated as partnerships but most are individually owned and operated. As the number of farms has decreased, the average size of existing farms has increased, with owners expanding their acreages through purchase or rental of additional land. A relatively small proportion of farmers rent all the land they farm. In 1971, there were 170 million acres of land in agriculture and this was distributed among 366,128 farms of which 69 per cent were owned by farm operators and 31 per cent were rented. Eleven per cent were run by operators who did not live on their farms.

The cultivated area of a farm is frequently determined by the type of production carried on and the extent of family or hired labour available. On a farm specializing in such crops as fruits and vegetables, the acreage is small but the labour requirements are large. At the other extreme, on a mechanized grain farm on the Prairies, a farmer may work 1,000 acres or more with very little help.

Although 82 per cent of the country's farm land lies in western Canada, farming is carried on in all provinces and even in a few small areas of the Yukon Territory and the Northwest Territories.

There are five main types of farms in Canada: dairy, livestock (excluding dairy), grain, combination grain and livestock, and special crops. Farms specializing in general livestock production are found mainly in Alberta and Ontario, and to a lesser extent in Quebec and Saskatchewan. Ontario and Quebec have the most dairy farms, but 40 per cent of Nova Scotia's farms are devoted to dairying. General grain farms with such crops as wheat, rapeseed, oats, barley and flax are found mostly in



Saskatchewan, Alberta and Manitoba and these provinces also have the largest number of farms engaged in a combination of grain and livestock production. Ontario has the most special-crop farms—those that gain most of their revenue from vegetables, fruits, potatoes, other root crops and tobacco—with Quebec second and British Columbia third.

Agriculture benefits the country in other ways than simply providing sufficient food for the population's needs. The processing of farm products and the manufacture of farm machinery, feeds and fertilizers contribute to industrial employment in Canada, and thousands of jobs at the retail level depend on the sale of agricultural products and supplies. At the same time, farm customers provide an important market for petroleum products, building materials, electric power and a host of other products.



Seeding wheat lands in Southern Alberta.

Field Crops

Spring wheat, of which more than 23 million acres were seeded in 1974, is the most important crop grown on the Prairies. Historically linked with the development of this region, wheat has contributed not only to the Prairie economy but also to that of the country as a whole. Farm cash receipts from wheat have more than doubled since 1971 and in 1974 amounted to approximately \$1,950 million. Since about 75 per cent of the crop is exported, wheat is an important earner of foreign exchange for Canada.

However, wheat is not the only grain grown in Canada: oats and barley in the Prairies, particularly, and corn in Ontario are essential to the Canadian livestock industry. In 1974, Prairie farmers grew about 569 million bushels of oats and barley and total Canadian production of these grains amounted to about 650 million bushels.

The oilseeds—rapeseed, flaxseed, soya beans and sunflower seed—make up the third major type of field crop. These crops are processed to produce vegetable oils for human consumption or industrial use and for high-protein meal for livestock feed. Production of rapeseed, flaxseed and sunflower seed is centred in the Prairie Provinces, that of soya beans in Ontario. In 1974, there were 3.3 million acres planted to rapeseed, 1.5 million acres to flaxseed, 445,000 acres to soya beans, and 30,000 acres to sunflower seed.

Elsewhere in Canada, field crop production is more diversified than on the Prairies. The emphasis placed on livestock production has an influence on the kinds of field crops grown and a large proportion of the land is devoted to forage crops, pasture and feed grains. Grain corn is grown for livestock feed as well as for industrial use and the crop has become an important one in Ontario where production has reached 100 million bushels a year. Grain corn is also increasing in importance in Quebec. Fodder corn is important in Ontario, where production amounts to more than 8 million tons annually.

Although its acreage is relatively small, tobacco has a high cash value. Most of Canada's tobacco production is centred in Ontario, but some is grown in Quebec and a smaller amount in the Maritimes. Winter wheat and vegetables are other important sources of income for Ontario farmers. Vegetables in Quebec and potatoes in New Brunswick and Prince Edward Island are the major sources of income from field crops for farmers in those provinces.

Horticultural Crops

The fruit and vegetable industry is an important part of the agricultural and food distribution sectors of the economy. Fresh and processed fruits and vegetables account for more than one third of the quantity of all food consumed in Canada. There are over 25 fruit and vegetable crops (potatoes excluded) grown commercially in Canada with an annual farm value of over \$300 million.

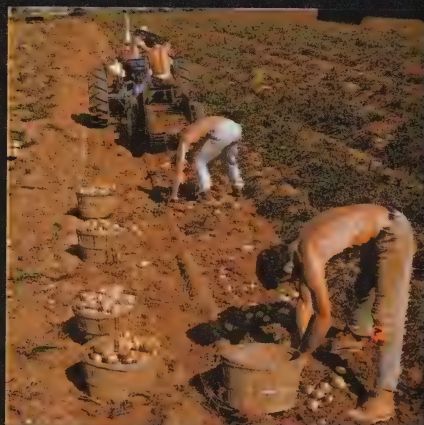
The most important fruit grown in Canada is the apple. Commercial apple orchards are found in Nova Scotia, New Brunswick, southern Quebec, much of Ontario and the interior of British Columbia, particularly in the Okanagan Valley. Tender tree fruits—pears, peaches, cherries and plums—are also grown in Ontario, with the most important concentrations in the Niagara region and in Essex County. These fruits, as well as apricots, are also grown on a large scale in the southern part of the Okanagan Valley in British Columbia.

Strawberries and raspberries are cultivated commercially in the Maritimes, Quebec, Ontario and British Columbia. British Columbia fruit growers also produce loganberries commercially in the Lower Mainland and on Vancouver Island. Grapes are grown in the Niagara district of Ontario and on a smaller scale in British Columbia. The native blueberry is found wild over large areas in Canada and is harvested in commercial quantities in the Atlantic Provinces and Quebec. A cultivated crop is grown in British Columbia.

The production of field-grown vegetables in Canada is seasonal. During the winter when no domestic vegetables are being harvested, except in greenhouses, supplies of most fresh vegetables are imported from the US. During the growing season a varying percentage of domestic requirements are met from Canadian



Fresh and processed fruits and vegetables account for more than one third of the quantity of all food consumed in Canada.







Corn is an important crop in Ontario and Quebec.

crops. Some vegetables are exported from Canada, particularly to a few large centres of population in the US close to the border.

Potatoes are the most important of the vegetables produced in Canada. Production slightly exceeds consumption and normally about 5 per cent is exported.

The processing industry plays an important part in the marketing of Canadian grown fruits and vegetables. Over the years factories have been built in most of the important growing regions and considerable proportions of fruit and vegetable crops are canned, frozen, or otherwise processed each season, especially asparagus, beans, peas, corn and tomatoes. In recent years the importance of freezing has been increasing. Most vegetables for processing are grown under a system whereby the processor contracts annually with each grower for certain acreages.

The processing of canned tender tree fruits has declined considerably and imports have increased rapidly. Over the past 25 years the tonnage and value of exported vegetables has varied considerably but there is a slight upward trend. However, in the same period vegetable imports have doubled.

In recent years the supply of fruits available for consumption in Canada had remained relatively unchanged, but 1973 experienced a noticeable rise. The vegetables, which showed a decline in 1972, are now showing a slight upward trend. The per capita domestic disappearance of all fruits for 1973 of 271.2 pounds (fresh equivalent weight) was 8.8 per cent higher than the five-year (1967-1971) average of 249.3 pounds. Of this total 123.9 pounds per capita were fresh, 59.4 pounds were canned, 3.2 pounds were frozen, 68.1 pounds were made into juice and 13.7 pounds were dried. Jams, jellies and marmalades accounted for 1.5 pounds and unspecified uses, 1.4 pounds. Per capita disappearance of vegetables, excluding potatoes, was 115.8 pounds for the same period and this was almost identical to the five-year

(1967-1971) average of 115.5 pounds. Per capita disappearance of vegetables averaged 75.8 pounds of fresh vegetables, 26.8 pounds of canned vegetables and 10.0 pounds of frozen vegetables in 1973 (fresh equivalent weight). There were 3.22 pounds otherwise used.

There were 548.6 pounds of fruits and vegetables, including potatoes and mushrooms, available per capita for consumption in Canada in 1973.

The total area operated under glass and plastic in the greenhouse industry for 1972 and 1973 amounted to 35.8 million square feet and 34.3 million square feet, respectively, while the total value of growers' sales stood at \$76.9 million in 1972 and \$83.3 million in 1973.

In 1973, nurseries had a total revenue of \$65 million. Approximately 43 per cent of this represents growers' sales of traditional fruit and nursery stock and 33 per cent was earned by supplying the increasing demand for contracted services.

Sugar beets are grown commercially in Quebec, Manitoba and Alberta and beet sugar factories are located in these provinces. In Quebec, commercial production is centred in the St-Hilaire area of the Eastern Townships. Alberta (where sugar beets are grown under irrigation) produces the largest crop.

Maple syrup is produced commercially in Nova Scotia, New Brunswick, Quebec and Ontario. The bulk of the crop comes from the Eastern Townships of Quebec, a district famous in both Canada and the US as the centre of the maple products industry. Virtually all of the maple products are exported to the US, the larger proportion in the form of sugar, although substantial quantities of syrup are also

Potato digging machines create extensive patterns near Drummond, NB.



shipped. Much of the syrup sold in Canada is marketed in one-gallon cans direct to the consumer from the producer but a considerable amount of both sugar and syrup is sold each year to processing firms.

Honey production in 1974 was below that in 1973. Honey is produced commercially in all provinces except Newfoundland and yields naturally vary to some extent from year-to-year. Alberta is consistently the largest producer. Honey-bees are kept in some fruit growing districts for pollination purposes and are used for pollination of certain seed crops. To facilitate storage, shipment and uniformity of quality, large quantities of Canadian honey are pasteurized. Beekeepers' marketing co-operatives are active in several provinces. In 1973, Canada exported 16.1 million pounds of honey valued at \$6.7 million, 5.3 million pounds more than the quantity exported in 1972. Exports went mainly to Britain, the US, France, the Federal Republic of Germany, Japan and the Netherlands.

Livestock

Preliminary estimates for 1974 indicate that total cash receipts from farm produce were \$8,448 million of which \$4,141 million came from livestock and animal products. Cattle (including calves) and pig sales in 1974 amounted to \$1,440 million and \$783 million respectively. Cash receipts from the sale of sheep and lambs in 1974 decreased to about \$11.1 million.

On June 1, 1974 the number of cattle and calves on farms in Canada (not including Newfoundland which had 7,138 head at the time of the June 1, 1971 Census) was estimated at 14,978,500, up 6 per cent from 14,133,500 at June 1, 1973. This is a

Estimated meat production and disappearance, 1973 and 1974

	1973	1974	1973	1974
		Beef		Veal
Animals slaughtered No.	3,411,700	3,629,300	482,200	615,800
Meat exports '000 lb.	88,241	57,461	¹	¹
Meat production " "	1,910,575	1,999,106	65,857	77,415
Domestic disappearance " "	2,030,365	2,129,279	69,676	78,250
Per capita consumption lb.	91.8	94.7	3.1	3.5
		Pork		Mutton and lamb
Animals slaughtered No.	10,398,800	10,289,300	501,100	424,300
Meat exports '000 lb.	125,614	92,174	156	126
Meat production " "	1,360,418	1,347,230	21,893	18,336
Domestic disappearance " "	1,274,687	1,345,022	82,183	57,053
Per capita consumption lb.	57.6	59.9	3.7	2.5
		Offal		
Production '000 lb.	125,461	129,683		
Domestic disappearance " "	79,982	83,295		
Per capita consumption lb.	3.6	3.7		

¹Included with beef.



A cattle drive in the foothills of Alberta.

record high for total cattle at this time of year. The number of milk cows, estimated at 2,080,000 was down 3 per cent from 2,152,000 in June, 1973 but dairy heifers increased to 550,600 from last year's 539,800 an increase of 2 per cent. Beef cows, estimated at 4,255,500 were up 8 per cent while beef heifers were up 9 per cent to 1,541,100 from 1,419,500 in 1973. Steers were up 12 per cent and calf figures jumped 6 per cent. Inspected slaughter of cattle in 1974, reported by the Department of Agriculture, was up 3 per cent to 2,975,833, while calf slaughter reported at 392,811 was up 35 per cent over the previous year.

The Department of Agriculture also reports exports of slaughter cattle (200 pounds and more) to the US amounted to 8,167, a decrease of 49 per cent from 1973 and feeder cattle (200 pounds and more) dropped from 128,167 in 1973 to 10,109 in 1974.

The Department of Agriculture reports that the weighted average price per hundredweight of A1 and A2 steers at Toronto was \$49.37 in 1974—above the 1973 price of \$46.56.

On June 1, 1974, pigs on farms in Canada (not including Newfoundland which had 14,639 at the June 1, 1971 Census) numbered 6,564,000, down 1 per cent from 1973. Pigs slaughtered in 1974 totalled 9,269,491 according to the Department of Agriculture, an increase of 3 per cent from 1973. Increased slaughterings lowered prices, making the weighted, average price at Toronto \$50.29 per hundredweight for Index 100 pigs, down from \$54.66 in 1973. The Department reports that total exports of dressed pork were down in 1974 to 92,039,875 pounds from 117,169,311 pounds in 1973, a decrease of 21 per cent.

The sheep and lamb population of Canada (not including Newfoundland which had 9,384 at the June 1, 1971 Census) suffered a further decrease to 783,500 in June 1974 from 832,500 in June 1973, a drop of 6 per cent. The West showed a loss of 8 per cent; the East, a drop of 3 per cent. The breeding flock of sheep one year old and over showed a decrease of 5 per cent. Inspected slaughter of sheep and lambs was down to 185,077 in 1974 from the 1973 figure of 234,206. Exports of sheep and lambs to the US was down to 803 in 1974 compared to 7,216 in 1973 according to the Department of Agriculture. Imports of live animals from the US decreased from 56,227 in 1973 to 28,872 in 1974.

Per capita disappearance of meats on a cold dressed carcass weight basis

Year	Beef	Veal	Mutton and lamb	Pork	Offal	Canned Meat	Total
lb.							
1935	53.6	9.8	6.0	39.3	5.5	1.5	115.7
1940	54.5	10.8	4.5	44.7	5.5	1.3	121.3
1945	65.4	12.4	4.3	52.8	5.6	3.3	143.8
1950	50.8	9.4	2.2	55.0	4.9	5.1	127.4
1955	69.1	8.4	2.6	49.2	5.3	4.2	138.8
1960	70.0	6.9	2.9	52.6	4.8	6.4	143.6
1966 ¹	84.0	6.9	3.9	47.0	3.6	4.2	149.6
1967 ¹	83.2	7.0	4.2	54.5	3.9	4.7	157.5
1968 ¹	85.1	6.8	4.9	53.5	3.7	4.7	158.7
1969 ¹	85.6	5.1	5.0	51.4	3.8	4.6	155.5
1970 ¹	84.4	4.6	4.6	58.7	3.4	4.7	160.4
1971 ¹	89.2	4.7	3.3	68.3	4.4	..	169.9
1972	92.5	3.5	4.7 [†]	61.0 [†]	4.1	..	165.8
1973	91.8	3.1	3.7	57.6	3.6	..	159.8
1974	94.7	3.5	2.5	59.9	3.7	..	164.3

¹Intercensal revisions.

..Figures not available.

[†]Revised figures.

Dairying

According to estimates of June 1, 1974, there were 2.1 million milk cows in Canada. A total of 16,670 million pounds of milk was produced during the year. Although milk cows are raised in every province in Canada, production tends to be concentrated in the more densely populated regions of Quebec and Ontario which accounted for 74 per cent of the country's milk supply in 1974.

The most important manufactured dairy products were butter, cheese, concentrated milk products and ice cream mix; approximately 60 per cent of the total milk supply was used to manufacture these products. Fluid milk sales accounted for 34 per cent and farm use made up the balance, or 6 per cent. Farm use figures include milk fed to livestock, farm home consumption and farm-made butter. In 1974 the farm use figures exclude farm-made butter.

Dairy farms in Canada are fewer and bigger than a decade ago. Using the census years of 1961, 1966 and 1971, there were, respectively, 309,000, 222,000 and

145,000 farms reporting milk cows. The principal dairy breeds in Canada are Holstein, Ayreshire, Guernsey and Jersey. In addition there is a small amount of milk from dual-purpose breeds. During 1974, the farm value of milk production was approximately \$1,156 million. The farm value of milk used in factories was \$563 million and that for fluid sales \$537 million.

Milk production and utilization, Canada, by regions 1972-74

Region	Year	Total milk production	Milk used for dairy factory products	Fluid milk sales	Milk used on farms
(thousand pounds)					
Maritimes	1972	784,831	355,319	375,902	53,610
	1973	743,450	317,116	378,730	47,604
	1974	727,359	296,164	387,466	43,729
Quebec and Ontario	1972	12,992,439	8,793,083	3,561,524	637,832
	1973	12,303,055	8,020,025	3,627,943	655,087
	1974	12,316,431	7,986,627	3,694,640	625,164
Prairies	1972	2,921,996	1,639,589	853,856	428,551
	1973	2,852,328	1,567,809	877,291	407,228
	1974	2,606,437	1,366,290	890,179	349,968
British Columbia	1972	976,937	330,205	603,137	43,595
	1973	986,146	314,195	626,092	45,859
	1974	1,020,135	312,380	657,543	50,212
Totals, Canada	1972	17,676,203	11,118,196	5,394,419	1,163,588
	1973	16,884,979	10,219,145	5,510,056	1,155,778
	1974	16,670,362	9,961,461	5,629,828	1,079,073

Poultry and Eggs

Recently there has been a high degree of specialization and concentration, particularly in the egg, broiler chicken and turkey industries. The egg industry itself, for example, is further specialized into fields such as hatching eggs, started pullets and shell eggs for the table. Over 80 per cent of eggs are produced by about 5 per cent of producers. The production of broiler chickens and turkeys has comparable features. A few very large enterprises account for most of the geese and ducks produced in the country.

The producers of eggs, turkeys and broiler chickens operate within the constraints of supply-management programs directed by provincial producer marketing boards. The activities of egg producers and turkey producers at the provincial levels are co-ordinated by national agencies (the Canadian Egg Marketing Agency and the Canadian Turkey Marketing Agency, respectively), which operate under a federal government charter.

Summary of supply and disposition of poultry meat and eggs in Canada, 1974

	Total poultry meat	Fowl	Chicken	Turkey	Goose	Duck	Eggs
	(thousand pounds eviscerated weight)						'000 doz
Stocks at January 1	75,899	5,106	33,814	36,418	335	226	3,539
Production	1,034,769	70,195	710,544	241,942	3,705	7,745	459,997
Imports	22,369	1,953	7,427	7,339	—	5,650	8,323
Total	1,133,037	77,254	751,785	285,699	4,040	13,621	471,864
Exports	20,488	—	20,483	3	—	2	14,382
Stocks at December 31	90,110	5,181	34,804	48,987	195	943	5,086
Eggs used for hatching .....	...	...	...	...	...	...	25,346
Domestic disappearance	1,022,439	72,073	696,498	236,709	3,845	12,676	427,050
				lb.			doz
Per capita consumption	45.4	3.2	31.0	10.5	0.17	0.56	19.0

— Nil or zero.

... Not applicable.

Furs

Fur statistics have been collected and published annually since 1920. For the 1973-74 fur season the reported harvest of pelts was 3,840,842, a 3 per cent decrease from the 3,964,373 pelts harvested in 1972-73. The value, however, increased to \$52,063,107 from the 1972-73 figure of \$46,789,071. The value of wildlife pelts in 1973-74 was \$32,747,525 or 63 per cent of the total. The value of pelts produced by fur farms increased from \$16,844,679 to \$19,315,582 for the 1973-74 season. The value of mink pelts was \$19,178,328, only about 68 per cent of the 1965-66 peak of



\$28,279,404. The value of undressed furs exported during the 1973-74 season increased to \$41,679,000 over the previous season's value of \$41,159,000. Imports were also up to \$55,715,000 from \$39,648,000 in 1972-73.

**Number and value of pelts produced by kind,
Canada, 1972-73 and 1973-74**

Kind	1972-73			1973-74		
	Number	Value \$	Average value \$	Number	Value \$	Average value \$
Wildlife						
Badger	5,170	68,131	13.18	5,134	110,507	21.52
Bear:						
Black or brown	3,008	146,788	48.80	4,261	221,134	51.90
Grizzly	19	3,230	170.00	27	7,550	279.63
White	472	289,685	613.74	546	618,024	1,131.91
Beaver	452,275	9,912,695	21.92	431,071	9,072,632	21.05
Cougar	35	2,361	67.46	40	3,233	80.82
Coyote or prairie wolf	78,148	2,192,763	28.06	87,139	3,169,119	36.37
Ermine (weasel)	82,127	92,413	1.13	55,968	57,463	1.03
Fisher or pekan	13,798	508,651	36.86	12,566	613,347	48.81
Fox:						
Blue	119	2,520	21.18	208	4,909	23.60
Cross and red	46,318	1,357,775	29.31	63,321	2,650,470	41.86
Silver	392	9,263	23.63	533	24,406	45.79
White	10,146	196,059	19.32	53,415	1,727,350	32.34
Not specified	12,439	346,582	27.86	17,674	859,465	48.63
Lynx	53,400	4,739,826	88.76	35,372	3,071,387	86.83
Marten	61,109	831,745	13.61	62,356	907,428	14.55
Mink	100,049	1,770,456	17.70	68,425	1,143,721	16.71
Muskrat	1,506,810	3,720,005	2.47	1,434,871	3,728,490	2.60
Otter	18,411	828,659	45.01	18,016	739,146	41.03
Rabbit	7,743	784	0.10	15,308	5,719	0.37
Raccoon	61,290	637,136	10.40	73,442	1,075,603	14.65
Seal:						
Fur seal — North Pacific ¹	8,228	373,753	45.42 ²	9,169	432,860	47.21 ²
Hair seal ^{3,4}	94,572 ⁴	1,155,081 ⁴	12.21 ⁴	130,496 ⁴	1,789,748 ⁴	13.71 ⁴
Skunk	224	196	0.88	867	1,283	1.48
Squirrel	291,492	304,770	1.05	183,309	151,700	0.83
Wildcat	3,682	149,116	40.50	4,129	225,095	54.52
Wolf	4,208	217,119	51.60	5,088	230,090	45.22
Wolverine	1,022	86,830	84.96	1,242	105,646	85.06
Sub-total	2,916,706	29,944,392	...	2,773,993	32,747,525	...
Ranch-raised:						
Fox	1,488	99,101	66.60	1,395	137,254	98.39
Mink	1,046,179	16,745,578	16.01	1,065,454	19,178,328	18.00
Sub-total	1,047,667	16,844,679	...	1,066,849	19,315,582	...
Total	3,964,373	46,789,071	...	3,840,842	52,063,107	...

¹Commonly known as Alaska Fur seal. The value figures are on the net returns to the Canadian government for pelts sold.

²The gross average realized price per pelt sold in 1972-73 was \$90.82 and \$97.46 in 1973-74.

³Includes data for the three Maritime Provinces.

⁴Hair seal data are based on a calendar year for 1973 and 1974 except for the Northwest Territories which is on a fur year ending June 30.

... Not applicable.



1



2

1. Farm community of Gray, Sask. at harvest time.
2. Prosperous farming south of Vancouver, BC.
3. Potato farming area of Grand Falls, NB.
4. A modern farm with private airstrip near Woodstock, Ont.



3



4

Fisheries

Canada's over-all fish landings continued declining in 1974. Unlike recent years, the demand for fishery products was too weak to allow price increases to compensate for lower catches. Fishermen's gross earnings consequently decreased by about 11 per cent in comparison with 1973. General economic conditions in the main consuming countries contributed to the difficulties encountered by the Canadian fishing industry, which employs about 57,000 fishermen and an estimated 20,000 persons in fish processing plants across the country.

Preliminary catch statistics for 1974 show total Canadian landings, including freshwater fisheries, were estimated at 970,000 metric tons, the lowest quantity landed since 1960. The value of \$283 million was \$38 million or 12 per cent less than the record set in 1973.

The seafood catch, by far the most important, was 14 per cent (152,000 tons) less than in 1973, while the corresponding value shows a 13 per cent or \$38 million decline. Although the Atlantic Coast fisheries accounted for most of the decrease in landings, the Pacific Coast had the biggest decline in landed value.

Atlantic Coast landings, at 782,000 tons, were 12 per cent (106,000 tons) less than in the previous year, while landed value decreased by \$2 million or less than 1 per cent. This situation was due to an increase in fish prices and changes in the species mix. A decrease of \$5 million in Newfoundland's landed value offset a \$5 million increase in Nova Scotia.

Whale flensing at Coal Harbour, Vancouver Island, BC.





Eel fishing at Île d'Orléans, Que.

Although market prices declined substantially in 1974, prices to fishermen were on average slightly higher than in 1973. The volume of the catch was 13 per cent lower than in 1973 while its value dropped only marginally. The prospects for decreasing prices to fishermen were prevented by the federal government's introduction of a program of assistance for cold storage and inventory financing costs for frozen groundfish and shellfish products, which was designed in such a way as to ensure that prices to fishermen would be maintained.

Pacific Coast landings dropped 25 per cent in 1974 (from 184,000 tons to 138,000 tons). Dollars paid to west coast fishermen declined by some \$37 million. Most of this decline occurred in the salmon fishery.

Fishing for salmon in Johnstone Strait, BC.



Of the pelagic and estuarial species, salmon is the most important. It is generally accepted that salmon abundance occurs cyclically. The 1973 fishing season seemed to coincide with the peak of the cycle of many salmon species; that of 1974 did not. This, combined with lower than normal water temperatures preventing the growth of plant plankton (an important source of food for salmon), caused 1974 salmon landings to drop 28 per cent (34,000 tons) compared with 1973. This decline represented a \$33 million loss to Pacific Coast salmon fishermen.

A shift in the 1974 salmon catch breakdown saw sockeye now accounting for 35 per cent of the catch; chum 20 per cent; pink 18 per cent; coho 16 per cent; springs 11 per cent.

Export prices for most Canadian fishery products declined in 1974. Oil-related disruptions in the economy, the emergence of a surplus meat situation in the US, and the intensifying competition from new supply sources of fish from Japan and Korea, all contributed to the problem. Many US firms had purchased large stocks of high priced seafood in the fall of 1973 and early 1974; this inventory, together with heavy supplies of Alaska pollock blocks and flatfish fillets from Japan and Korea at relatively low prices, began to weaken demand and prices for traditional frozen groundfish products.

The \$435 million value of all exports, compared with \$499 million in 1973, represents a decline of roughly \$64 million or 12 per cent. Imports rose quite significantly during the first three quarters of 1974 (an increase of about 25 per cent) but they levelled off quickly during the last quarter with the result that the yearly total amounted to \$120 million, \$9 million more than in 1973.

Fishing wharf at Petty Harbour, Nfld.



Forestry

Canada's forests are among her greatest renewable resources. Stretching across the continent in an unbroken belt 600 to 1,300 miles wide, they provide raw material for the great lumber, pulp and paper, plywood and other wood-using industries so vital to the country's economy. In addition, the forests of Canada control water run-off and prevent erosion, they shelter and sustain wildlife, and they offer unmatched opportunities for human recreation and enjoyment.

Forest land—that available for producing usable timber—covers more than 800 million acres. The total volume of wood on these lands is estimated at 683,000 million cubic feet, of which four fifths is coniferous and one fifth deciduous.

Three quarters of Canada's productive forest area is known as the Boreal Forest, stretching in a broad belt from the Atlantic Coast westward and then northwest to Alaska. The forests of this region are predominantly coniferous, with spruce, balsam fir and pine the most common species. Many deciduous trees are also found in the Boreal Forest; poplar and white birch are the most widespread.

The Great Lakes—St. Lawrence and Acadian regions are south of the boreal region. Here the forests are mixed, and many species are represented. Principal conifers are eastern white and red pine, eastern hemlock, spruce, cedar and fir. The main deciduous trees are yellow birch, maple, oak and basswood.

Entirely different in character is the coastal region of British Columbia. Here the forests are coniferous, and because of a mild, humid climate and heavy rainfall, very large trees are common—200 feet tall and more than six feet in diameter. This region contains less than 2 per cent of the country's forest area, but supplies almost one fourth of the wood cut. Species are cedar, hemlock, spruce, fir and Douglas-fir.

The coniferous forests of the mountainous regions of Alberta and the British Columbia interior are mixed; distribution and characteristics of species depend on local climate, which ranges from dry to very humid. Production in this area has expanded rapidly in recent years with the establishment of many new pulp mills.

The only true deciduous forests in Canada occupy a relatively small area in the southernmost part of Ontario, which is predominantly an agricultural district.

Ownership and Administration of Forests

Eighty per cent of Canada's productive forest land is publicly owned. Under the British North America Act, the various provincial governments were given the exclusive right to enact laws regarding management and sale of public lands within their boundaries, including the timber and wood on those lands. In the northern territories, which contain only about 8 per cent of the country's productive forest land, the forests are administered by the federal government.

For many years the policy of both the federal and provincial governments has been to retain in public ownership lands not required for agricultural purposes. In some of the older settled areas of Canada, however, a high proportion of land is privately owned, especially in the three Maritime Provinces, where nearly two thirds of the productive forest area is owned by individuals and companies. Thus, the administration and protection of most of Canada's productive forest area is vested in the various provincial governments, which make the forests available to private industry through long-term leasing and other arrangements.



Reforestation near Chilliwack, BC. Forest lands of British Columbia cover 138 million acres, or 60 per cent of the total area.

Forest Industries

This group of industries accounted for approximately 17.6 per cent of all Canadian exports in 1974. It includes logging; the primary wood and paper manufacturing industries, using roundwood as their chief raw material; and the secondary wood and paper industries, using lumber, wood pulp, basic paper, and so on, as raw materials to be converted into a host of different wood and paper products.

Logging. The output of Canada's forests in the form of sawlogs, veneer logs, pulpwood, poles and other roundwood is estimated at 5,078 million cubic feet (MMcf) for 1973. This is a considerable increase in production from 1972 (4,384 MMcf). British Columbia accounted for approximately 49 per cent of the total, followed by Quebec with 20 per cent and Ontario with 13 per cent.

Pulpwood production in the provinces east of the Rocky Mountains increased by 10 per cent in 1973 (to 1,497 MMcf). This was caused by a greater demand for roundwood by the pulp and paper industry owing to improved markets for their products.

Production of roundwood in the interior region of British Columbia increased substantially (from 1,121 MMcf in 1972 to 1,321 MMcf in 1973), production in the coastal region jumped from 872 MMcf to 1,156 MMcf during the same period. The net result was an increase in 1973 production in British Columbia of approximately 24.2 per cent of 1972 production.



Water bomber (top) and bulldozer (bottom) fighting a forest fire in Newfoundland.



The trend toward fewer exports of roundwood continued in 1973 with the value of exports down from \$34 million in 1972 to \$31 million in 1973.

The value of shipments by the logging industry increased from \$1,873 million in 1972 to \$2,494 million in 1973. The number of persons employed in logging increased from 40,363 in 1972 to 49,573 in 1973 and wages increased from \$382 million to \$573 million due to increased wage rates and an over-all increase in production of 20 per cent.

Sawmills and Planing Mills. This industry is particularly dependent upon the general economic condition of the country and on the state of foreign markets, particularly the market in the US. With the decline in economic conditions in Canada and the US — residential construction in both countries decreased in the course of 1974 — the lumber market fell off considerably both in price and volume. Because of this decline, lumber production in Canada reversed its upward trend of several years and declined to an estimated total of 13,628 million board feet in 1974, a decrease of about 12 per cent from 1973 when production amounted to an all time high of 15,465 million board feet. The long term trend toward increased size of individual sawmills and toward more complete automation is continuing particularly in the interior of British Columbia where the sawmill industry is becoming more and more integrated with the pulp and paper industry.

Other Wood Industries. This group includes the shingle mills, veneer and plywood mills and particle board plants which like the sawmills and pulp and paper mills are primary wood industries. It also includes the secondary wood industries which further manufacture lumber, plywood and particleboard into flooring, doors, sashes, laminated structures, prefabricated buildings, boxes, barrels, caskets, woodenware and so on. In 1973 the veneer and plywood industry, the single most important of this group, accounted for \$486,703,521 in shipments of goods of own manufacture and paid their manufacturing employees \$110,104,000 in salary and wages.

Principal statistics of the pulp and paper industry, 1971-73

Item		1971	1972	1973
Establishments.....	No.	142	141	146
Employees.....	No.	79,397	78,969	80,085
Salaries and wages.....	\$'000	745,608	808,869	884,242
Value of shipments of goods of own manufacture...	\$'000	2,832,267	3,127,821	3,790,939
Value added-manufacturing activity	\$'000	1,272,551	1,374,129	1,803,889
Pulp shipped.....	'000 tons	6,419	7,383	7,936
	\$'000	878,132	976,147	1,301,486
Paper and paperboard shipped	'000 tons	11,939	12,848	13,463
	\$'000	1,751,847	1,925,194	2,252,280
Newsprint exported	'000 tons	7,798	8,102	8,396
	\$'000	1,084,282	1,157,509	1,285,928

The manufacture of pulp and paper has been Canada's leading industry for many years. —▶



Pulp and Paper. The manufacture of pulp and paper has been Canada's leading industry for many years. Although it is not growing as fast as some other manufacturing industries in Canada, it still ranks first in employment, salaries and wages paid, and in value added by manufacture. The manufacturing value added by this one industry accounts for 1.5 per cent of the total Gross National Product and it contributed 10.6 per cent to the total value of domestic exports in 1973 (11.3 per cent in 1972). Canada is the second largest producer of wood pulp in the world (20,461,725 tons in 1973) after the US (48,355,000 tons), and the largest exporter. It is by far the largest producer of newsprint, 9,212,533 tons in 1973, which is close to 40 per cent of the world total.

Although the pulp and paper industry is primarily engaged in the manufacture of wood pulps and basic papers and paper-boards, it also produces converted papers and paper-boards and even chemicals, alcohol and other by-products. More than 68 per cent of the wood pulp manufactured in 1973 was converted in Canada to other products, particularly newsprint. The rest was exported.

Quebec has the largest share of Canada's pulp and paper industry, accounting for 30.1 per cent of the total value of production in 1973. It is followed by British Columbia with 28.7 per cent and Ontario with 19.7 per cent. Development in British Columbia has been climbing rapidly in recent years owing to the establishment of a number of kraft pulp and paper mills, particularly in the interior of the province. In eastern Canada the kraft sector of the pulp and paper industry has grown most quickly.

Paper-converting Industries. These include asphalt roofing manufacturers, paper box and bag manufacturers, and other paper converters. In 1973 this group had 502 establishments (513 in 1972), employed 43,078 persons (41,789 in 1972), and paid \$364,234,000 in salaries and wages (\$326,430,000 in 1972). The value of factory shipments set a new record of \$1,480,089,000 (\$1,286,995,000 in 1972). In contrast to the basic pulp and paper industry the paper-converting industries are primarily dependent on the domestic market.



Wood fibre is transformed into pulp for paper.



Iron ore terminal at Sept-Îles, Que.

Minerals and Energy

Canada is richly endowed with mineral wealth: it ranks among the world's largest producers of minerals. A great deal of Canada's history is closely entwined with mineral exploration and development, beginning with Frobisher's search for illusory gold in the 16th century. Coal in Nova Scotia and iron ore in Quebec were discovered and later mined in the 17th and 18th centuries. The Geological Survey of Canada, founded in 1842, encouraged the collection of information about Canada's minerals. In the next decade came the first gold rush — to Barkerville in the Cariboo district of British Columbia. Silver, zinc and lead were subsequently found in the Kootenay district. Crews blasting a roadbed for the Canadian Pacific Railway in northern Ontario first revealed the riches in copper and nickel to be found there. The most famous event in Canadian mining history undoubtedly was the Klondike gold rush of 1896, but more significant have been the discoveries in the 20th century of cobalt, silver, uranium, asbestos and potash among other minerals, as well as more copper, nickel and iron ore.

The remarkable progress of the Canadian mining industry since World War II is shown by the increase in value of mineral production from \$499 million in 1945 to \$11,618 million in 1974. A measure of the importance of mining to the Canadian economy may be found in the following figures. In 1973 expenditures by mining and exploration companies (excluding the petroleum and natural gas industry) for exploration, development, and capital and repair expenditure was greater than \$1,254 million; over \$7,000 million worth of mineral products exported—over one quarter of Canada's export trade; more than 100,000 Canadians employed in the industry; and about 300 mines operating. Cities such as Sudbury, Ont. and Trail, BC depend almost entirely on the mineral wealth in the surrounding area, while Toronto and Calgary are financial centres for the mining and oil industries and many people employed in these cities depend on mining for their livelihood.

The value of production of Canadian minerals in 1974 increased to \$11,618 million from \$8,365 million in 1973 and \$6,403 million in 1972. Metallic minerals accounted for 42 per cent of the value of Canadian mineral production in 1974. In order of importance the principal metallic minerals produced in Canada are copper, nickel, zinc, iron ore, gold, silver and lead. Headed by crude oil and natural gas, mineral fuels accounted for 44 per cent of the total value of production. Non-metallic minerals and structural materials accounted for 14 per cent. The main structural materials are cement, sand and gravel, and stone, while the non-metallic minerals group is dominated by asbestos followed by potash, salt and elemental sulphur. The leading mineral commodity in 1974 was crude oil with a value of production of \$3,585 million, up from \$2,247 million in 1973 and \$423 million in 1960.

Copper production in 1974 amounted to 928,551 tons, valued at \$1,400 million; the figures for 1973 were 908,241 tons and \$1,158 million. Canada ranks fourth in the production of copper in the non-Communist world. The major producing provinces were British Columbia (327,221 tons), Ontario (319,742 tons) and Quebec (157,962 tons).

Nickel production in Canada in 1974 amounted to 299,661 tons, valued at \$978 million, an increase from 274,527 tons and \$813 million in 1973. Most of Canada's nickel is produced in the Sudbury, Ont. region from mines operated by The International Nickel Company of Canada, Ltd. and Falconbridge Nickel Mines Ltd.

The fourth most important mineral in Canada is zinc. Production in 1974 amounted to 1,278,139 tons (worth \$892 million); in 1973 it was 1,352,074 tons (worth \$653 million).

Ranked according to value of production, iron ore was the fifth most important mineral produced in Canada. Production was 52.2 million tons, valued at \$719 million in 1974. In 1973, 52.4 million tons worth \$606 million were mined.

Natural gas production continued at a high level with an output of 3,083,378 MMcf (million cubic feet) worth \$687 million. Production in 1973 was 3,119,461 MMcf (\$452 million) and in 1960 was only 523,000 MMcf (\$52 million).

Canada's mineral production, by class, 1964-74 (million dollars)

Year	Metals	Non-metals	Fossil fuels	Structural materials	Total
1964	1,702	287	973	403	3,365
1965	1,908	327	1,045	434	3,714
1966	1,985	363	1,152	481	3,980
1967	2,285	406	1,234	455	4,380
1968	2,493	447	1,343	440	4,722
1969	2,378	450	1,465	443	4,736
1970	3,073	481	1,718	450	5,722
1971	2,940	501	2,014	512	5,968
1972	2,952	513	2,368	570	6,403
1973	3,850	614	3,227	673	8,365
1974 ¹	4,853	887	5,169	709	11,618

¹Preliminary estimates.

Figures may not add to totals owing to rounding.

Canada's mineral production, by province, 1972-74

Province or territory	1972		1973 ^r		1974 ¹	
	Value		Value		Value	
	\$'000	%	\$'000	%	\$'000	%
Newfoundland	290,610	4.5	374,506	4.5	453,509	3.9
Prince Edward Island	1,097	--	1,680	--	1,600	--
Nova Scotia	57,520	0.9	61,719	0.7	81,367	0.7
New Brunswick	119,930	1.9	162,355	1.9	218,733	1.9
Quebec	782,641	12.2	926,083	11.1	1,152,083	9.9
Ontario	1,534,754	24.0	1,852,875	22.2	2,422,312	20.8
Manitoba	323,291	5.0	419,214	5.0	443,566	3.8
Saskatchewan	409,620	6.4	510,313	6.1	826,382	7.1
Alberta	1,978,606	30.9	2,764,142	33.0	4,418,058	38.0
British Columbia	677,995	10.6	975,699	11.7	1,186,901	10.2
Yukon Territory	106,781	1.7	150,667	1.8	185,194	1.6
Northwest Territories	120,337	1.9	165,489	2.0	228,393	2.0
Total	6,403,182	100.0	8,364,742	100.0	11,618,098	100.0

¹Preliminary estimates.^rRevised estimates.

Figures may not add to totals owing to rounding.

--Too small to be expressed.

Natural gas by-products (propane, butanes and pentanes plus) remained in seventh place among Canada's most important minerals. In 1974, production amounted to \$629 million, up from \$349 million the previous year.

Asbestos production in 1974 was 1,824,000 tons valued at about \$311 million. Over 80 per cent of the asbestos produced in Canada comes from the province of Quebec; the rest comes from British Columbia, the Yukon Territory, Newfoundland and Ontario. Canada produces over 40 per cent of the world's total supply of asbestos and is the world's leading producer.

Cement is the most important structural material produced in Canada with about two thirds of the production coming from Ontario and Quebec.

Among the minerals of previously lesser importance whose production has increased significantly in the past few years are potash, molybdenum, elemental sulphur, gold and coal.

Canadian potash production increased from less than \$1 million in 1960 to \$303 million in 1974 as a number of mines were opened in Saskatchewan between 1962 and 1970. About 95 per cent of the world's potash is used as fertilizer.

Canada is second only to the US among the producers of molybdenum. The value of production increased from \$1 million in 1960 to \$58 million in 1974, with over 75 per cent of the Canadian production coming from British Columbia.

In 1974 elemental sulphur production increased to 5,253,000 tons from 4,593,855 tons in 1973 and the value rose to \$66 million from \$23 million. Natural gas is the major source of elemental sulphur in Canada so its production is in direct proportion to natural gas production regardless of the price of sulphur. Nearly all sulphur

is transformed into sulphuric acid of which one half is used in the manufacture of fertilizers.

Although gold production decreased to 1,718,000 troy ounces in 1974 from 1,954,340 troy ounces the previous year, its value, due to increases in world prices, rose to \$269 million from \$190 million in 1973.

Coal production saw a slight increase from 22.6 million tons in 1973 to 23.6 million tons in 1974 with its value increasing from \$180 million to \$268 million.

Petroleum and Natural Gas

The petroleum industry is Canada's leading mineral producer; it extracted about \$4,900.7 million worth of hydro-carbon products in 1974, an increase of 60.0 per cent over 1973. Crude oil, Canada's most important mineral, contributed \$3,585.1 million (616.2 million barrels) to this total. Natural gas production accounted for \$686.6 million (3,083,378 MMcf) and pentanes, propane and butanes for \$629.0 million (113.1 million barrels). In addition, elemental sulphur is a very valuable by-product of gas-processing plants.

Alberta accounted for 86 per cent of all the industry's production, Saskatchewan for 9 per cent, British Columbia for 4 per cent and all the other provinces for 1 per cent.

Due to increases in energy costs the value of exports of crude oil and natural gas in 1974 increased dramatically while the quantities declined. Natural gas exports amounted to 959.2 million Mcf (thousand cubic feet), a decline of 7.0 per cent from 1973. The value of \$517.5 million represented an increase of 47.6 per cent over

Electric shovel loads truck in Lac Jeannine's open pit iron mine in Quebec.





Oil refinery in Winnipeg, Man. utilizes crude oil from the Prairie provinces.

1973. Crude oil exports in 1974 of 332 million barrels, down 21 per cent from 1973, had a value of \$3,408.5 million, an increase of 129.8 per cent over the \$1,483.1 million in 1973. Imports of crude amounted to 291.2 million barrels. Refineries located east of the "energy line" (a line running from Pembroke, Ont., south to Brockville, Ont.) historically have operated on imported crude. This is supplied mainly by Venezuela and the Middle East. Canadian crude, mostly from western Canada, is used west of the energy line. During late 1973 foreign crude prices escalated sharply while at the same time volume restrictions were enforced by certain oil exporting nations. As a result some western crude was supplied to Montreal, Que., by pipeline to Sarnia, Ont., and thence by ship. Western crude also moved by pipeline to Vancouver, BC, to be shipped through the Panama Canal to the eastern seaboard.

In order to help redress a situation where western Canadian crude oil was being exported at relatively low prices, while eastern Canada had to rely on expensive foreign crude, the federal government applied an export tax effective November 1, 1973. The proceeds from this tax are used to subsidize eastern Canadian consumers.

Total sales of refined petroleum products were 592.6 million barrels in 1974 including 208.9 million barrels of motor gasoline, 192.5 million barrels of middle distillates, 110.6 million barrels of heavy fuel oils and 80.6 million barrels of lubricating oils and grease, asphalt and other products.

The movement of oil and natural gas necessitates large pipeline systems to carry these products to many parts of the continent. Consequently, oil and gas pipelines have become a major form of transportation. In 1974 the transportation of crude oil

Canada's mineral production, by kind, 1973 and 1974

Mineral	1973		1974 ¹	
	Quantity '000	Value \$'000	Quantity '000	Value \$'000
Metallics				
Antimony .....	..	3,807	..	5,561
Bismuth	70	348	36	292
Cadmium	4,197	15,276	3,917	15,527
Calcium	652	490	1,018	897
Cobalt	3,344	8,899	4,240	14,275
Columbium (Cb ₂ O ₃)	3,177	4,233	4,113	6,452
Copper	1,816,482	1,157,507	1,857,102	1,400,101
Gold	1,954	190,376	1,718	268,981
Indium	681	..	..	..
Iron ore	52,358	606,106	52,216	719,036
Iron, remelt .....	..	48,971	..	69,871
Lead	753,879	121,676	671,969	139,105
Magnesium	13,679	5,483	13,070	9,073
Mercury	950	..	..	..
Molybdenum	30,391	51,852	29,603	57,992
Nickel	549,055	813,101	599,322	977,681
Platinum group	354	41,994	360	65,776
Selenium	521	4,763	591	2,778
Silver	47,488	119,954	43,765	201,965
Tantalum	171	1,165	430	3,646
Tellurium	92	560	54	314
Tin	291	570	310	1,222
Tungsten (WO ₃)	4,640	..	3,544	..
Uranium (U ₃ O ₈)	9,517	..	9,402	..
Zinc	2,704,148	652,944	2,556,278	892,139
Total metallics .....	...	3,850,072	...	4,852,684
Non-metallics				
Asbestos	1,863	234,323	1,824	310,680
Barite	102	1,052	..	1,300
Feldspar	—	—	—	—
Fluorspar .....	..	4,620	..	8,170
Gemstones	154	307	..	310
Gypsum	8,389	21,067	8,235	22,170
Magnesitic dolomite and brucite .....	..	2,656	..	3,000
Nepheline syenite	569	7,860	607	8,510
Nitrogen .....	..	..	..	..
Peat	359	15,376	391	15,358
Potash (K ₂ O)	4,909	176,876	6,072	303,490
Pyrite, pyrrhotite	26	173	49	376
Quartz	2,766	11,051	2,686	11,956
Salt	5,565	49,631	5,704	56,225
Soapstone, talc, pyrophyllite	81	1,778	93	2,207
Sodium sulphate	543	7,165	604	13,187
Sulphur in smelter gas	757	10,070	797	12,676
Sulphur, elemental	4,594	23,816	5,253	66,242
Titanium dioxide, etc. ....	..	46,619	..	51,396
Total non-metallics .....	...	614,439	...	887,253

Canada's mineral production, by kind, 1973 and 1974 (concluded)

Mineral	1973		1974 ¹	
	Quantity '000	Value \$'000	Quantity '000	Value \$'000
Mineral fuels				
Coal ton	22,567	179,731	22,990	268,000
Natural gas Mcf	3,119,461	451,853	3,083,378	686,614
Natural gas by-products bbl	116,251	348,865	113,055	629,009
Petroleum, crude "	655,853	2,246,692	616,238	3,585,090
Total fuels "	...	3,227,142	...	5,168,713
Structural materials				
Clay products (bricks, tile, etc.) "	..	61,170	..	68,490
Cement ton	11,126	240,561	11,308	244,711
Lime "	1,891	30,340	2,088	33,447
Sand and gravel "	233,461	213,437	242,200	230,000
Stone "	91,894	127,579	94,800	132,800
Total structural materials "	...	673,087	...	709,448
Grand total "	...	8,364,742	...	11,618,098

¹Preliminary estimates.

.. Figures not available.

... Figures not appropriate or not applicable.

- Nil or zero.

and its equivalent, liquefied petroleum gases, and refined petroleum products amounted to 529,821 million pipeline barrel miles, down 5.1 per cent from 1973, and that of natural gas to 1,913,866 million Mcf miles, an increase of 3.8 per cent in a year.

In 1974 the total operating and capital expenditures of the petroleum industry amounted to \$3,456.9 million. The industry has made great efforts to find new reserves and increase its production of hydro-carbon products since 1961 when its investment was only \$716.2 million. In 1974 geological and geophysical work accounted for \$241.5 million of the total; \$217.0 million was spent on acquiring land or leases; \$621.6 million on exploratory and development drilling; \$364.9 million on capital additions; \$463.0 million on field, well and natural gas plant operations; and \$1,548.9 million on royalties, taxes and other miscellaneous expenditures. Seventy-three per cent of all expenditure amounting to \$2,525.4 million was in Alberta; 9 per cent in the Northwest Territories, the Yukon Territory and the Arctic islands; 6 per cent in British Columbia; and 9 per cent in Saskatchewan.

The energy crisis of 1973 brought about a much greater awareness that the use of energy, particularly oil and gas, was growing faster than the rate at which new resources were being found. Canada is fortunate in that it is one of the few countries in the world that is self sufficient in energy. Canada has proven reserves of conventional crude oil to last approximately 12 years, and enough natural gas to last 24 years at current rates of consumption. However, the long-term oil and natural gas supply depends on harnessing the vast reserves of "synthetic" crude oil in the Athabasca tar sands, and in finding more reserves in the frontier areas of Canada.

Great Canadian Oil Sands Limited has the only plant now operating in the tar sands area, but several other consortiums are planning similar operations. The Athabasca tar sands contain an estimated 300,000 million barrels of synthetic crude recoverable by mining or thermal processes, although only some 6,000 million barrels are recoverable using present technology. Along with this development is the increasing emphasis being placed on exploratory work in the Arctic and offshore areas together with studies on the optimum method of transporting any energy form that may be found.

Coal

In 1974 western Canadian bituminous coal production decreased to 11.7 million tons compared with 12.1 million tons in 1973. Technical difficulties and an unsteady demand from the Japanese metallurgical industry were the main contributing factors. Alberta's sub-bituminous coal industry increased production by 655 thousand tons. This was principally due to the addition in 1973 of a 300,000 kW unit at the Sundance electric generating plant where the amount of coal consumed increased by 1.1 million tons. In Saskatchewan a mild winter contributed to the decline in lignite production from 4.0 million tons in 1973 to 3.8 million tons in 1974. However the trend toward higher consumption by electric generating plants is expected to resume in 1975 as the development of the few remaining hydro sites cannot meet the growing demand for electrical energy.

Production of coal, by province, 1973 and 1974

	1973	1974
	Short tons	
Nova Scotia	1,175,587	1,410,043
New Brunswick	394,219	415,048
Saskatchewan	4,028,280	3,842,140
Alberta	9,196,397	9,176,010
British Columbia	7,772,866	8,146,979
Total, Canada	22,567,349	22,990,220

In eastern Canada production of bituminous coal increased by 234 thousand tons in Nova Scotia. This was the result of the opening of the new Langan Mine. New Brunswick Coal Ltd., the provincially owned coal operation in New Brunswick showed an increase of 21 thousand tons.

Canadian production of coal in 1974 increased to 23 million tons—1.8 per cent or 423 thousand tons more than in 1973. Excluding subvention payments, the preliminary value of this production amounted to \$268 million, up from the 1973 figure of \$180 million. This represents an increase in value of 46 per cent per ton and reflects the substantially increased costs which energy products now demand, and the greater reliance on coal vis-à-vis oil now being assumed by the industrial world.





Automated pipeline terminal in Calgary, Alta.

Electricity

Canada's electrical power development has grown steadily at a remarkable rate since the beginning of this century. A modest 133,000 kilowatts of generating capacity in 1900 had increased to approximately 56,828,000 by the end of 1974.

Although water power traditionally has been the main source of electrical energy in Canada and still is, thermal sources are becoming more important and this trend is expected to continue. The choice between the development of a hydro-electric power site and the construction of a thermal generating station must take into account a number of complex considerations, the most important of which are economic. The heavy capital costs involved in constructing a hydro-electric project are offset by maintenance and operating costs considerably lower than those for a thermal plant. The long life of a hydro plant and its dependability and flexibility in meeting varying loads are added advantages. Also important is the fact that water is a renewable resource. The thermal station, on the other hand, can be located close to areas where power is needed, with a consequent saving in transmission costs. However, pollution problems at these plants are coming to be regarded as an undesirable factor.

The marked trend toward the development of thermal stations, which became apparent in the 1950s, can be explained to some extent by the fact that in many parts of Canada, most of the hydro-electric sites within economic transmission distance of load centres had been developed, and planners had to turn to other sources of electrical energy. More recently, however, advances in extra-high voltage transmission techniques have given impetus to the development of hydro power sites

previously considered too remote. Nevertheless, thermal stations should be the more important of the two sources in the long run.

Water Power Resources and Developments. Substantial amounts of water power have been developed in all provinces except Prince Edward Island, where there are no large streams. The resources of Newfoundland are estimated to be considerable; topography and run-off favour hydro-electric power development. In fact, the most dramatic development of any single hydro project is now taking place at Churchill Falls in Labrador. When this project was completed in 1974, the capacity of the plant reached 5,225,000 kW, thus making it the largest single generating plant of any type in the world. The water power of Nova Scotia and New Brunswick, small in comparison with that of other provinces, is none the less a valuable source of energy. The numerous moderate-sized rivers provide power for the cities and for the development of the provinces' timber and mineral resources. Quebec is richest in water power resources, with over 40 per cent of the total for Canada, and has the most developed capacity. Even this considerable figure could be doubled when plans for the development of a number of rivers flowing into James Bay become a reality. Ultimately this development could result in an additional 12 to 15 million kW. The present largest single hydro-electric installation in Quebec is Hydro-Quebec's 1,574,260-kW Beauharnois development on the St. Lawrence River. Others are the Bersimis I development, with a capacity of 912,000 kW, and the 742,500-kW Chute des Passes plant of the Aluminum Company of Canada Ltd. Another significant development is Hydro-Quebec's Manicouagan–Outardes project which when completed will produce 5,540,000 kW on the two rivers. Already

Lennox generating station, Ontario Hydro's first oil-fired plant.

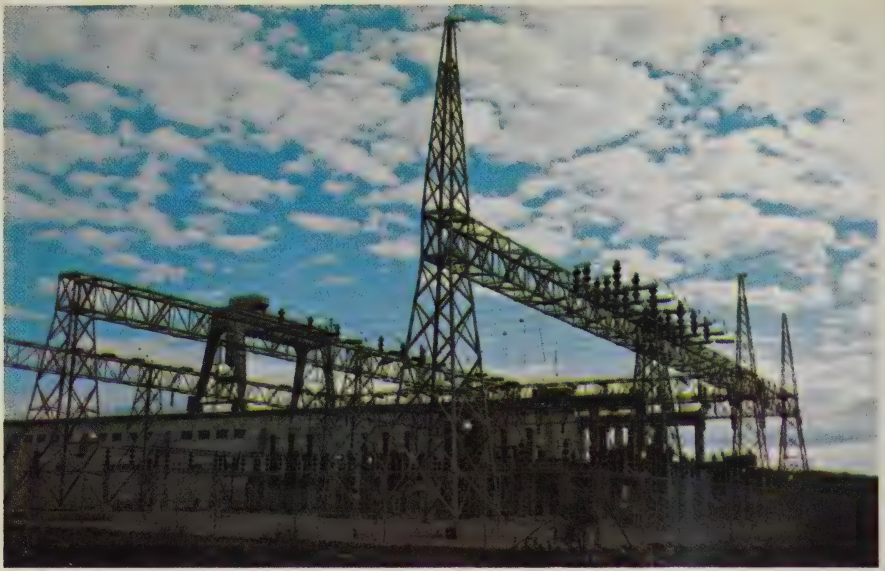




Heavy water plant at Port Hawkesbury, NS, recently purchased by Atomic Energy of Canada Limited.



some 3,900,000 kW are installed. Almost all of the sizable water power potential in Ontario within easy reach of demand centres has been developed, and planners are looking to more remote sites. Most of the hydro-electric power produced in the province comes from the Hydro-Electric Power Commission of Ontario, the largest public utility in Canada. Its chief stations are on the Niagara River at Queenston, with total generating capacities of 1,804,200 kW. Manitoba is the most generously endowed of the Prairie Provinces, with immense potential on the Winnipeg, Churchill, Nelson and Saskatchewan rivers. In Alberta, most of the developments are located on the Bow River and its tributaries. British Columbia ranks second in terms of potential water power resources, and is third in installed generating capacity. The current development of the Peace and Columbia rivers will provide immense power resources in the future. In the Yukon Territory and the Northwest Territories, water power is of special importance in the development of mining areas, such as Mayo and Yellowknife. In the Yukon Territory most resources are on the Yukon River and its tributaries. Although not yet thoroughly surveyed, the rivers flowing into Great Slave Lake and the South Nahanni River draining into the Mackenzie River have considerable potential.



Power plant in Great Falls, Man.

Conventional Thermal Power. Some 90 per cent of all conventional thermal power generating equipment in Canada is driven by steam turbines and the remainder of the load is carried by gas turbine and internal combustion equipment. Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Saskatchewan, Alberta and the Northwest Territories depend on thermal stations for most of their power requirements. The abundance of Quebec's wealth of water power has so far limited the application of thermal power in that province to local use. The James Bay project should maintain hydro pre-eminence. Manitoba and British Columbia both have substantial amounts of thermal capacity but current development is still of hydro electricity.

Nuclear Thermal Power. Development of commercial electric power generation in thermal plants using the heat generated by nuclear reactors is one of the major contributions of Canada to energy resource technology. This development has centred around the CANDU reactor which uses a natural uranium fuel with a heavy water moderator. Heavy water as a moderator provides a high energy yield and facilitates the handling of spent fuel. The first experimental reactor went into use in 1962 at Rolphton, Ont., with a capacity of 20,000 kW. Since then, four major nuclear projects have been undertaken. The first full-scale nuclear plant is situated at Douglas Point on Lake Huron. It consists of a single unit, completed in 1967, with a capacity of 220,000 kW. The second project is a four-unit 2,160,000-kW capacity plant built at Pickering east of Toronto. Its four units came on line from 1971 to





Grand Falls, NB, with dam in foreground.

1973. Both the Douglas Point and Pickering plants use heavy water as a coolant. The third nuclear plant is a 250,000-kW unit situated at Gentilly, Que., using boiling light water as a coolant. The fourth plant is the 3,200,000-kW Bruce Station at Douglas Point, Ont., scheduled for completion by 1978. However, the utilization of present nuclear plants has been hindered by a shortage of heavy water, but recently instituted programs to increase heavy water production should alleviate this shortage in the near future.

Power Generation and Utilization. In 1974 Canada's generating facilities produced 278,954 million kWh of electric energy, 75 per cent in hydro-electric stations. Energy exported to the US exceeded by 12,955 million kWh the energy imported, bringing the total available to Canadian users to 266,000 million kWh. Industry used about 54 per cent of the total energy available in Canada; homes and farms accounted for 22 per cent; and commercial customers for 15 per cent. Average domestic and farm consumption continues to rise year by year. In 1973 it was 8,170 kWh ranging from a low of 5,146 kWh in Prince Edward Island to a high of 10,243 kWh in the Yukon Territory. The average annual bill for domestic and farm customers was \$137.21.

Industry

Industrial Growth

Early in the 1960s, the Canadian economy rebounded from the relative stagnation which had marked the late 1950s. With few exceptions, the 1960s witnessed rates of growth approaching those achieved during the early 1950s. In the period from the first quarter of 1961 to the fourth quarter of 1969, real output increased by 68.6 per cent or at an average quarterly rate of 1.5 per cent. In 1970, there was a dampening of the rate of growth, reflecting to some extent the tightened monetary and fiscal situation introduced in the previous year. From the fourth quarter of 1969 to the fourth quarter of 1970, total real output increased by an average 0.5 per cent quarterly. From the fourth quarter of 1970 to the second quarter of 1974, the rate of over-all growth equalled that of 1961-69.

As indicated in the accompanying Table, the 2.2 per cent average quarterly

Quarterly growth rates¹

	4th Q 1957	1st Q 1960	1st Q 1961	4th Q 1969	4th Q 1970	2nd Q 1974
	1st Q 1960	1st Q 1961	4th Q 1969	4th Q 1970	2nd Q 1974	4th Q 1974
Real domestic product	1.1	-0.3	1.5	0.5	1.5	-0.5
Goods-producing industries	1.2	-0.9	1.6	0.1	1.5	-1.4
Agriculture	0.7	-3.7	0.9	0.0	0.0	-1.9
Forestry	3.5	-2.0	1.2	-2.3	1.4	-0.1
Fishing and trapping	-1.6	8.4	0.2	-1.7	-1.4	-4.9
Mining	1.7	-1.0	1.4	3.9	1.1	-1.6
Manufacturing	1.4	-0.6	1.8	-0.7	1.8	-1.5
Non-durables	1.5	0.1	1.4	0.4	1.4	-2.3
Durables	1.3	-1.6	2.2	-1.9	2.2	-0.7
Construction	-0.5	0.5	1.3	0.4	1.1	-2.3
Electric power, gas and water utilities	2.8	1.0	1.9	2.1	2.0	1.0
Service-producing industries	1.0	0.5	1.5	0.8	1.5	0.1
Transportation, storage and communication	1.1	0.9	1.6	0.8	2.0	0.5
Transportation	1.0	0.9	1.7	1.6	2.0	0.0
Trade	1.1	--	1.4	0.3	1.7	-2.3
Wholesale	1.8	-0.9	1.7	0.3	1.8	-3.3
Retail	0.8	0.4	1.2	0.3	1.7	-1.7
Finance, insurance and real estate	1.0 ²	²	1.5	1.0	1.3	0.9
Community, business and personal service	1.3	0.5	1.7	1.0	1.1	0.9
Public administration and defence	0.5 ²	²	0.6	1.0	1.4	1.0

¹Based on the terminal years compound-interest rate formula.

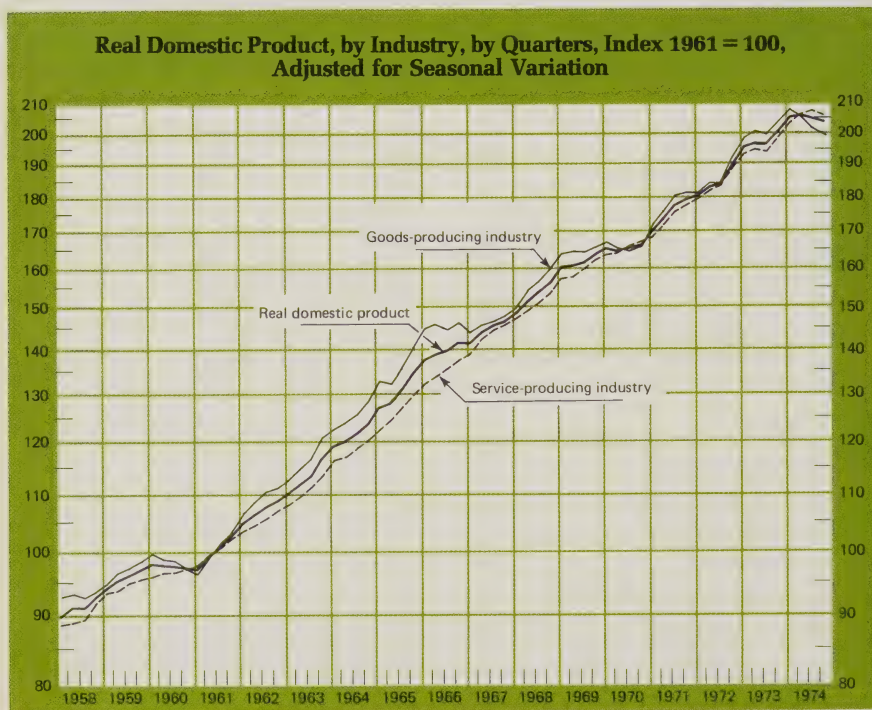
²No data are available prior to 1961 on a 1961 base due to a break in historical continuity resulting from the implementation of the 1960 standard industrial classification and the 1961 weight and reference base for the indexes. The data for the 1957-60 period are on a 1948 standard industrial classification and 1948 weight and reference base.

--Too small to be expressed.

increases in the output of durable goods in the two most recent expansionary periods were the highest for any major industry group in the 1970-74 periods. The above-average advance of the durable manufacturing component in expansionary periods can in fact be said to be among the most notable features of the economy's performance since 1961. Growth was particularly strong in the transportation equipment, electrical appliances and equipment, and primary metals components. In 1974, consumer demand for durable goods fell. This mainly affected production and sales of motor vehicles and major household appliances.

The two most recent periods of expansion, when compared with the expansion in the late 1950s, reveal that some industry groups have advanced more slowly than during the earlier expansion. The deceleration in electric power, gas and water utilities which were still among the fastest-growing industry groups — and the deceleration in mining and wholesale trade appeared to be a phenomenon which brought the rate of growth of these groups more in balance with that of the economy as a whole. Both industries had experienced exceptional expansionary pressures during the earlier postwar years.

Strong international demand for Canadian minerals, massive hydro-electric development, the use of natural gas in the West and marketing of it in the East required





Farm implements await shipment from a plant in Hamilton, Ont.

large scale capital investments. Investment reached a high for that period in 1955-58. The result was a surge in the output of the industry concerned as each new project became operational. These industries are strongly affected by technological innovations and change. Following changes, a gradual easing in the rate of growth is generally expected. However, 1973 proved exceptional for the mines group as a whole. In 1974, there were strikes and a drop in production.

The accompanying chart illustrates the growth since 1957 in total real domestic product with a breakdown of the goods-producing and service-producing sectors. Over the past decade within the goods-producing industries, the durable manufacturing component has provided a prime thrust. Services continued to grow at the same rate of 1.5 per cent over both expansionary periods of 1961-69 and 1970-74.

The major factor behind this advance in the output of durables was the unprecedented increase in the production of motor vehicles and motor-vehicle parts, which by the end of 1974 had increased by 621 and 421 per cent respectively from the first quarter of 1961. Except for production stoppages due to labour disputes, motor-vehicle production advanced without major interruption until the second quarter of 1966 when output declined significantly. The temporary decline in production of this industry in both Canada and the US has been variously related to changes in economic conditions in North America generally, and particularly to the tightening of monetary conditions, and to inflation. In addition, public concern about car safety has also been generally mentioned as a factor in the decline of car sales. Clearly, none of these factors offers a unique explanation.

By the second quarter of 1967, improved consumers' confidence, supported by greater liquidity and a buoyant export market, encouraged an increased production of motor vehicles. However, during 1968 and 1969, various inhibiting factors, such as strikes and shortages of parts, directly or indirectly checked motor-vehicle production, which slumped sharply in 1970 in response to the softening in consumer demand and the growing popularity of vehicles manufactured overseas. For these reasons total annual manufacturing output declined for the first time since 1958 and the increase in volume of retail trade was the slowest since 1957. In 1971, motor-vehicle production once again surpassed its 1969 level. The industry made further gains during 1972, despite an interruption in the second half of the year to permit a major producer to switch product lines. Records were not set in 1973 or 1974 however, as the rate of growth over both years was lower than the annual average increase in automobile production of 14.6 per cent between 1961 and 1974. The slowdown was mainly due to a slackening in consumer durable demand.

The iron and steel industry has been another major contributor to industrial growth, increasing by 136 per cent since the first quarter of 1961. After reaching full capacity in 1965, this industry experienced some levelling off during 1966 and 1967. However, since the end of 1967, the industry has made solid gains, if one deducts the direct and indirect negative effects of time lost in labour disputes in the latter part of 1969 and in 1970. This strong expansion continued through most of 1971 and 1972. By the fourth quarter of 1974, output of the iron and steel mills had increased by 30 per cent from the first quarter of 1971.

The increase in the volume of construction has been a notable feature of industrial growth since 1961, despite industrial disputes in 1969, 1970 and 1972 and acute labour problems in 1973. This activity first surpassed its 1958 peak in 1962. In the intervening period, the output of the construction industry had hovered around its 1957 level. Large-scale new investments in industrial and social capital were made, however, during the mid-1960s in such industries as pulp and paper, hydro-electric power development (which provided a boost to non-residential construction) and in social capital such as hospitals and particularly schools. Construction activity was also spurred by projects commemorating Canada's Centennial in 1967 and by outlays for Expo 67. However, at this high level of activity, certain segments of the industry in some regions were straining against their available resources and as a result non-residential construction slowed somewhat early in 1967. The combination of scarce and costly funds, increasing costs and strikes, as well as a June 1969 deferral of capital-cost allowances on commercial projects in three provinces have all contributed to some weakness in this sector since the beginning of 1970.

The growing demand for housing, stimulated by the influx of people from rural areas and immigrants from abroad to the larger urban centres, and to some extent by the entry into the labour and housing markets of the first waves of the "baby boom" of the mid-40s, resulted in a considerable expansion in residential construction. With this went a new emphasis on the construction of multiple-dwelling units. The rate of housing starts peaked early in 1969 and continued sliding until the third quarter of 1970, reflecting scarcity of mortgage funds, rising interest rates and higher construction costs. The easing on the supply side was directly evident in the sharp increase in residential construction activity in the closing quarter of 1970.



Calgary, Alta. celebrated its centennial in 1975.

This renewed vigour continued through 1971 and most of 1972 despite industrial disputes in that year. House-building activity remained strong in 1973. However, residential construction began to decline in the latter half of 1974. The industry was also affected by major strikes in 1974.

Throughout the 1961-73 period, the service-producing industries have been a significant source of growth in the aggregate output of the Canadian economy, in the period from the first quarter of 1961 to the fourth quarter of 1969, transportation, wholesale trade and the community, business and personal service industry groups all experienced above-average quarterly growth rates. Transportation showed particular strength with a quarterly growth average of 2.0 per cent between the last quarter of 1970 and the second quarter of 1974, although wholesale trade was slowing down. Over the same period, railway transportation alone contributed 37 per cent of the gains in transportation, although the output of the air and pipeline transport industries grew more rapidly. In general, transportation has played a vital role in meeting Canada's large and growing export commitments. This was clearly indicated by the upsurge in activity of the rail and water transport industries at the height of the grain deliveries to overseas countries during 1963 and 1964. In 1966 and 1969, major components of the transportation group were severely affected

directly and indirectly by strikes. From the beginning of 1970 to the end of the first quarter of 1973 there were no major work stoppages except in the railway industry and even this group reached a higher level of growth than in 1969, thus continuing to make significant contributions to the change in total output in 1971 and 1972. In 1974 transportation output had more than doubled from its 1961 level with an increase of 137 per cent.

Work stoppages slowed industrial growth in 1974. The number of man-days lost increased by 60 per cent from 1973 and exceeded the previous records set in 1972 and 1969. The industries primarily involved were transportation, construction, the rubber industries, mining and grain elevators.

Under extreme distortions in both Canadian and international markets, increased prices have given rise to a much more uneasy situation than in 1972. Employment in 1973 expanded at the fastest rate in four years, surpassing the 1969 record. This increase, together with a slowing of growth in the labour force, led to a decline in unemployment, from 6.3 per cent in 1972 to 5.6 per cent in 1973 and 5.4 per cent in 1974. Prices however continued to climb erratically as illustrated by the changes in the consumer price index, which rose by 10.9 per cent in 1974 compared with 7.0 per cent in 1973, and 4.8 per cent in 1972.

In general terms, the Canadian economy has remained strong since 1961 with the exception of the latter part of 1969, the beginning of 1970 and 1974. In spite of increased prices, consumer demand grew sharply in 1973 with a resurgence in the manufacturing sectors, but fell in 1974 affecting manufacturing industries especially those producing durable goods. The volume of international trade followed a similar pattern with exports dropping by 6.2 per cent in 1974 after a 9 per cent increase the previous year. Imports increased by 3.6 per cent compared to a 12.5 per cent rise in 1973.



Harbour Square development on Toronto's downtown lakefront.

Capital Expenditures

A sustained rising income in Canada depends upon, among other things, the capacity to produce and sell goods and services. This capacity and its efficiency in turn depend largely on the amount invested in new mines, factories, stores, power generating installations, communications and transportation equipment, hospitals, schools, roads, parks and all other forms of capital which encourage the production of goods and services in future periods.

Surveys of these capital expenditures are made at regular intervals every year. On each occasion statistics are published for expenditures on housing, non-residential

Summary of capital and repair expenditures by province and territory, 1974 and 1975^{1,2} (million dollars)

		Capital expenditures			Capital and repair expenditures		
		Construc- tion	Machinery and equipment	Sub- total	Construc- tion	Machinery and equipment	Total
Atlantic region							
Newfoundland	1974	528.5	168.0	696.5	594.8	320.5	915.3
	1975	531.8	198.7	730.5	605.7	360.9	966.6
Prince Edward Island	1974	96.0	34.3	130.3	109.8	45.1	154.9
	1975	90.9	31.9	122.8	108.7	43.8	152.5
Nova Scotia	1974	583.6	321.5	905.1	694.0	449.1	1,143.1
	1975	617.4	323.2	940.6	745.5	463.2	1,208.7
New Brunswick	1974	620.0	326.8	946.8	728.2	437.4	1,165.6
	1975	714.0	370.3	1,084.3	835.1	496.1	1,331.2
Total, Atlantic region	1974	1,828.1	850.6	2,678.7	2,126.8	1,252.1	3,378.9
	1975	1,954.1	924.1	2,878.2	2,295.0	1,364.0	3,659.0
Quebec	1974	4,754.0	2,620.1	7,374.1	5,519.0	3,702.3	9,221.3
	1975	5,491.5	2,899.6	8,391.1	6,339.0	4,071.1	10,410.1
Ontario	1974	7,010.1	4,570.2	11,580.3	8,402.4	6,377.1	14,779.5
	1975	7,822.0	5,567.5	13,389.5	9,369.3	7,627.2	16,996.5
Prairie region							
Manitoba	1974	809.1	597.0	1,406.1	985.0	812.5	1,797.5
	1975	822.5	711.3	1,533.8	1,021.2	955.3	1,976.5
Saskatchewan	1974	705.7	564.0	1,269.7	918.2	789.3	1,707.5
	1975	838.9	710.0	1,548.9	1,075.6	966.8	2,042.4
Alberta	1974	2,345.9	1,343.1	3,689.0	2,749.4	1,753.6	4,503.0
	1975	2,805.1	1,507.1	4,312.2	3,265.1	1,980.6	5,245.7
Total, Prairie region	1974	3,860.7	3,504.1	6,364.8	4,652.6	3,355.4	8,008.0
	1975	4,466.5	2,928.4	7,394.9	5,361.9	3,902.7	9,264.6
British Columbia	1974	2,666.0	1,354.5	4,020.5	3,115.0	2,109.4	5,224.4
	1975	2,997.7	1,429.9	4,427.6	3,513.4	2,268.2	5,781.6
Yukon Territory and Northwest Territories ..							
	1974	379.3	53.2	432.5	397.2	85.8	483.0
	1975	347.7	52.4	400.1	369.1	88.0	457.1
Total, Canada	1974	20,498.2	11,952.7	32,450.9	24,213.0	16,882.1	41,095.1
	1975	23,079.5	13,801.9	36,881.4	27,247.7	19,321.2	46,568.9

¹Preliminary actual expenditures 1974, intentions 1975.

²Capital expenditures on machinery and equipment include an estimate for "capital items charged to operating expenses", in the manufacturing, utilities and trade totals.

construction, and machinery and equipment by all sectors of the Canadian economy. Approximately 25,000 establishments are surveyed for their investment intentions. In order to approximate full coverage, adjustments are made for non-surveyed and for non-reporting firms. In a few areas, expenditure estimates are arrived at independently on the basis of current trends and expert opinion in these fields (e.g. agriculture, fishing and housing).

Information on capital spending intentions provides a useful indication of market conditions both in the economy at large and in particular industries. Since such expenditures account for a large and relatively variable proportion of gross national expenditures, the size and content of the investment program provides significant information about demands to be placed upon the productive capacities of the economy during the period covered by the survey. In addition, information on the relative size of the capital expenditures program planned, both in total and for

Summary of capital and repair expenditures by sectors, Canada 1974 and 1975¹ (million dollars)

		Capital expenditures			Capital and repair expenditures		
		Construc- tion	Machinery and equipment	Sub- total	Construc- tion	Machinery and equipment	Total
Agriculture and fishing	1974	459.9	1,516.2	1,976.1	643.9	1,904.2	2,548.1
	1975	542.3	1,755.3	2,297.6	754.7	2,210.7	2,965.4
Forestry	1974	105.3	143.9	249.2	137.0	245.1	382.1
	1975	125.0	129.9	254.9	157.4	243.4	400.8
Mining, quarrying and oil wells	1974	1,528.6	494.3	2,022.9	1,711.6	1,069.1	2,780.7
	1975	1,762.5	542.7	2,305.2	1,973.4	1,172.0	3,145.4
Construction industry	1974	68.5	416.4	484.9	84.9	783.6	868.5
	1975	77.1	468.5	545.6	95.6	881.6	977.2
Manufacturing	1974	1,362.2	3,599.5	4,961.7	1,700.4	5,407.1	7,107.5
	1975	1,748.5	4,318.4	6,066.9	2,115.6	6,286.3	8,401.9
Utilities	1974	3,137.7	2,978.2	6,115.9	3,775.0	4,213.2	7,988.2
	1975	4,102.4	3,560.7	7,663.1	4,843.3	5,000.1	9,843.4
Trade, wholesale and retail	1974	359.3	550.0	909.3	440.1	645.7	1,085.8
	1975	358.8	536.0	894.8	443.3	631.2	1,074.5
Finance, insurance and real estate	1974	1,326.4	203.7	1,530.1	1,407.5	232.1	1,639.6
	1975	1,442.3	193.3	1,635.6	1,527.9	225.0	1,752.9
Commercial services	1974	436.9	1,264.6	1,701.5	466.7	1,407.2	1,873.9
	1975	508.3	1,394.9	1,903.2	538.2	1,562.9	2,101.1
Institutions	1974	1,071.7	267.5	1,339.2	1,210.8	307.5	1,518.3
	1975	1,269.8	289.2	1,559.0	1,422.8	333.7	1,756.5
Government departments ...	1974	3,666.5	518.4	4,184.9	4,305.3	667.3	4,972.6
	1975	4,427.5	613.0	5,040.5	5,113.6	774.3	5,887.9
Housing	1974	6,975.2	—	6,975.2	8,329.8	—	8,329.8
	1975	6,715.0	—	6,715.0	8,261.9	—	8,261.9
Total	1974	20,498.2	11,952.7	32,450.9	24,213.0	16,882.1	41,095.1
	1975	23,079.5	13,801.9	36,881.4	27,247.7	19,321.2	46,568.9

¹Preliminary actual expenditures 1974, intentions 1975.

—Nil or zero.





Halifax, NS.

individual industries, gives an indication of the views management hold on prospective market demands in relation to present productive capacity. Non-capitalized repair expenditures on structures and machinery and equipment are also given, but these are shown separately. By including these outlays, a more complete picture is provided of all demands likely to be made on labour and materials in accomplishing the program.

Provincial Expenditures

The expenditures shown for each province or territory represent the value of construction and the value of machinery and equipment acquired for use within the province or territory. Such expenditures represent gross additions to the capital stock of the province or territory, and a reflection of economic activity in that area. However, the actual production of these assets may generate its major employment and income-giving effects in other regions. For example, the spending of millions of dollars on plants and equipment in western Canada may generate considerable activity in machinery industries in Ontario and Quebec as well as construction activity in the western provinces.

It should be appreciated that there are statistical difficulties in making a precise geographic allocation of past or anticipated investment since many business firms operating in several provinces do not either record or plan their capital expenditures geographically. As a result, it has been necessary to use approximate breakdowns in many cases. Such is the case for investment in railway rolling stock, ships, aircraft and certain other items.

Housing

Adverse economic factors in Canada and throughout the world seriously affected the housing market in 1974. Consequently, after three years of steady growth, housing starts across Canada declined during the year by 17 per cent to 222,123. Multiple-unit dwellings, such as apartments, showed the greatest decline by 30 per cent, while starts on single-detached houses were down by 7 per cent. The construction of semi-detached houses and duplexes dropped by 17 per cent, and row housing by 14 per cent.

Although starts were down, the number of completions reached a record level of 257,243 due to the high volume of starts carried over from the previous year. Most of the increase in completions was in single-detached and row housing.

Direct lending by the Central Mortgage and Housing Corporation (CMHC) increased, resulting in 30,352 starts. This was due mainly to the success of the Assisted Home Ownership Program (AHOP) which granted some 18,300 loans for both existing and new houses, and which produced 11,773 starts in 1974. In an effort to stimulate house-building the program was restricted, late in the year, to loans for new homes only. To meet the demand the original AHOP budget of \$300 million was increased by an additional \$150 million, most of which was committed before year-end.

In November 1974 the Minister of State for Urban Affairs announced a \$500 grant to first-time buyers of new moderately-priced housing. The program was to remain in effect for one year.

The 1974 federal budget contained a number of housing items. A new Registered Home Ownership Savings Plan exempts from income tax, within certain limits, money which people save to buy or furnish a house — a total of \$1,000 can be

Prefabricated houses being erected in the Oakridges development, Calgary, Alta.



deducted from taxable income each year for up to 10 years. The sales tax on building materials was reduced from 11 per cent to 5 per cent, and eliminated entirely on construction equipment and on materials used in municipal water distribution systems. Capital cost allowances on funds invested for rental housing were also re-introduced.

A \$58 million pilot project, to encourage construction of moderate-rental units in cities where the shortage was most severe, offered CMHC funding at 8 per cent interest and was totally committed within a few weeks.

In December 1974 legislative amendments to the National Housing Act were announced to attract more than \$1,000 million in private capital into the construction of moderately-priced housing. The new legislation made AHOP interest-reducing grants available to people getting private loans to buy new homes under the same conditions as the government-funded Assisted Home Ownership Program. Owners of rental housing projects financed by private NHA-insured loans became eligible for grants on condition they enter into a minimum five-year agreement with CMHC to charge reduced rents.

The revisions give CMHC the authority to acquire and lease land at favorable rates to non-profit and co-operative housing corporations wishing to build low-rental projects. Assistance under the Municipal Infrastructure Program is extended and broadened for municipalities installing sewers and sewage treatment projects. Storm trunk sewers needed to open up new residential areas are now eligible and additional grants are available in high cost areas. Projects financed from sources other than CMHC become eligible for allowances and grants, and federal contributions for half the cost of preparing a comprehensive plan for the development of sewage facilities are also available.

The CMHC capital budget for 1975 was increased by 12.5 per cent to more than \$1,400 million, of which \$600 million has been directed to "quickstart" projects with the aim of increasing house production. The Corporation has identified 210,000 starts as the minimum acceptable level for 1975, considering current needs.

Subdivision of Laval, Que.





Condominiums in Richmond, BC.



The Estonian Co-operative apartments in Toronto, Ont.



Condominiums in North Vancouver, BC.

Manufacturing

Manufacturing is the largest of Canada's goods-producing industries. Because of this fact and of its importance to the growth of national productivity, its high demand for capital goods, and its contribution to exports, it plays an especially important role in the economy.

A monthly sample survey of households produced an estimate that an average number of 1,986,000 persons were being paid salaries or wages by the manufacturing industries in 1974, compared with a total for all industries of 8,105,000.

Preliminary data from a monthly survey shows that Canadian manufacturers shipped \$79,253 million of their own products in 1974, an increase of 21.3 per cent over 1973 in the same monthly survey. (By comparison, the annual average index of selling prices of manufacturing industries increased 19.9 per cent over the same period.)

An exact measure of exports of manufacturers is not routinely compiled, but if exports of fabricated materials and end products are accepted as roughly equivalent to manufactured products, Canadian manufacturers did some processing on about two dollars out of every three of exports of Canadian products in 1974. Domestic exports of fabricated materials amounted to \$10,899 million, compared with \$9,673 million for end products. This nearly equal status indicates the importance of industrial materials produced for export.

However, the end products—roughly equivalent to highly manufactured goods, though including very small values of non-manufactured goods—had increased in value almost 14 times since 1961, when they amounted to only \$706 million, while those of fabricated materials had nearly quadrupled from a 1961 figure of \$2,916 million. This is a striking reflection of the growth of those sectors of Canadian manufacturing producing more highly fabricated goods. For various reasons, these values are not strictly comparable with the value of over-all shipments of manufactures by Canadian factories, but they give an impression of the approximate intensity of export activity as measured by shipments. The importance of production for export would be appreciably higher if it were feasible to use a measure of the Canadian value added that is exported, as the over-all manufacturing shipments of Canadian manufacturers necessarily contain double counting of output from manufacturers supplying each other with inputs.

Most manufacturing activity in Canada is highly mechanized and Canadian factories thus constitute a large market for capital equipment. This is partly because many types of natural resource processing are inherently capital intensive, that is, they employ a great deal of machinery, equipment and buildings in proportion to employees. Industries producing highly manufactured goods—like machinery and automobiles—are increasingly important. In addition, high living standards, reflected in high wages, bring about economy in the use of workers and this often leads to increased mechanization.

In 1975, according to a survey of investment intentions, it was anticipated that the manufacturing industries would be accounting for 31 per cent of all capital



expenditures by business and government for new machinery and equipment. These expenditures represent, of course, not only the expansion of productive capacity but also some "deepening" of capital, or an increase in capital per employee or per unit of product.

Increasing capital intensity of production has probably been a prime cause of the rise in productivity of each employee in the manufacturing industries. Physical output in the manufacturing industries, by man-hour worked, increased at an average rate of 4.2 per cent over the 1961-73 period.

The leading manufacturing industry in Canada in 1974, measured by the value of shipments of its own products, was pulp and paper mills. With a total of \$5,320 million, reflecting substantial price increases during the year, this industry's shipments were some \$121 million greater than the second ranking industry, motor vehicle manufacturers, which occupied first place by a large margin in 1973. (These estimates of 1974 shipments are based on a monthly survey of shipments, inventories and orders in the manufacturing industries and are subject to change from the results of the annual census of manufactures.)

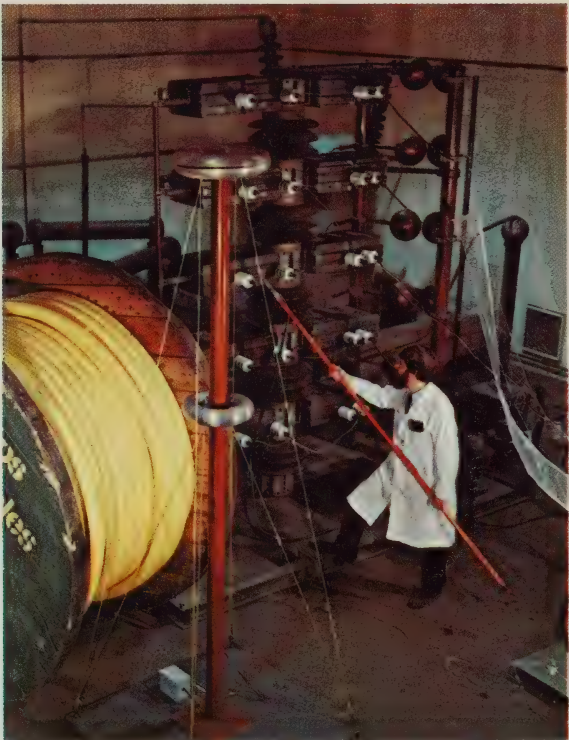
Petroleum refineries which, like pulp and paper mills, also experienced price increases for their products during 1974, had the third largest value of shipments (\$4,656 million), followed by slaughtering and meat processors, with \$3,277 million. Five industries, in descending order of magnitude, had shipments in the \$2,000 million-\$3,000 million range: iron and steel mills, \$2,879 million; motor vehicle parts and accessories manufacturers, \$2,241 million; miscellaneous machinery and equipment manufacturers, \$2,207 million; dairy products industry, \$2,071 million; and sawmills, planing mills and shingle mills, \$2,048 million. Seven industries (also in descending order of magnitude) had shipments of between \$1,000 million and \$2,000 million: manufacturers of industrial chemicals; metal stamping, pressing and coating industry; miscellaneous food processors, not elsewhere specified; communication equipment manufacturers; commercial printing; paper box and bag manufacturers; and the feed industry.

The largest four enterprises or groupings of companies had only 55 manufacturing establishments in 1970 but accounted for 8.9 per cent of all manufacturers' shipments, 6.8 per cent of manufacturing value added, and 4.7 per cent of total employees. The largest 16 enterprises accounted for more than 20 per cent of shipments. (While these data are not issued annually, figures on the size of manufacturing establishments are compiled each year.) The average size of a manufacturing establishment in 1972 was \$1.8 million worth of shipments of goods of own manufacture or about 51 persons measured by the number of persons employed. These averages are, however, greatly affected by the large number of small establishments operated by local or regional entrepreneurs in many industries throughout Canada. Actually, 54 per cent of the total work force in the manufacturing industries is in establishments employing 200 or more persons. There were 142 manufacturing establishments with more than 1,000 persons employed in 1972.

The proximity of the US, the interest of foreign firms in fabricated materials for use in foreign industry, and the generally profitable character of Canadian manufacturing over many years have led to widespread investment in Canadian manufacturing by companies outside Canada. However, for 1970, a special analysis of the census of manufactures showed that Canadian-controlled firms none the less



Cutting torches slice through red-hot 4" billets at a steel mill in Longueuil, Que.



Testing cables in a high voltage test laboratory in Brockville, Ont.

account for 55.8 per cent of all employees in the manufacturing industries; the proportion of value added is somewhat lower, 47.1 per cent.

The 1974 profits of incorporated companies classified as manufacturing industries amounted to 8.7 per cent of total revenue, before taxes and certain extraordinary items. Average weekly wages and salaries in Canadian manufacturing in a preliminary January 1975 figure were \$201.10.

Manufacturing statistics, selected years, 1920 to 1974

Year	Employees No.	Salaries and wages \$'000	Value added by manufacture \$'000	Value of shipments of goods of own manufacture ¹ \$'000
1920.....	598,893	717,494	1,621,273	3,706,545
1929.....	666,531	777,291	1,755,387	3,883,446
1933.....	468,658	436,248	919,671	1,954,076
1939.....	658,114	737,811	1,531,052	3,474,784
1944.....	1,222,882	2,029,621	4,015,776	9,073,693
1949.....	1,171,207	2,591,891	5,330,566	12,479,593
1953.....	1,327,451	3,957,018	7,993,069	17,785,417
1954.....	1,267,966	3,896,688	7,902,124	17,554,528
1955.....	1,298,461	4,142,410	8,753,450	19,513,934
1956.....	1,353,020	4,570,692	9,605,425	21,636,749
1957.....	1,340,948	4,778,040	..	21,452,343
1958.....	1,272,686	4,758,614	9,454,954	21,434,815
1959.....	1,287,810	5,030,132	10,154,277	22,830,836
1960.....	1,275,476	5,150,503	10,380,148	23,279,804
1961.....	1,352,605	5,701,651	10,434,832	23,438,956
1962.....	1,389,516	6,096,174	11,429,644	25,790,087
1963.....	1,425,440	6,495,289	12,272,734	28,014,888
1964.....	1,491,257	7,080,939	13,535,991	30,856,099
1965.....	1,570,298	7,822,919	14,927,753	33,889,425
1966.....	1,646,024	8,695,890	16,351,740	37,303,455
1967.....	1,652,827	9,254,190	17,005,696	38,955,389
1968.....	1,642,352	9,905,504	18,332,204	42,061,555
1969.....	1,675,332	10,848,340	20,133,593	45,930,438
1970.....	1,637,001	11,363,712	20,047,801	46,380,935
1971.....	1,628,404	12,129,897	21,737,514	50,275,917
1972.....	1,676,130	13,414,609	24,314,751	56,234,663
1973.....	1,761,000 ²	15,130,000 ³	28,911,000 ⁴	65,361,000 ⁵
1974.....	1,815,000 ²	17,247,000 ³	35,921,000 ⁴	79,253,000 ⁵

¹Before 1952, data represent gross value of production.

²Based on indexes of employment published in *Employment, Earnings and Hours* (Statistics Canada Cat. No. 72-002).

³Estimated from current data on earnings in manufacturing.

⁴Estimated on the basis of the ratio of "value added by manufacture" to "manufacturing gross output" in earlier years.

⁵Based on the monthly survey of shipments of manufacturers.

..Not available.

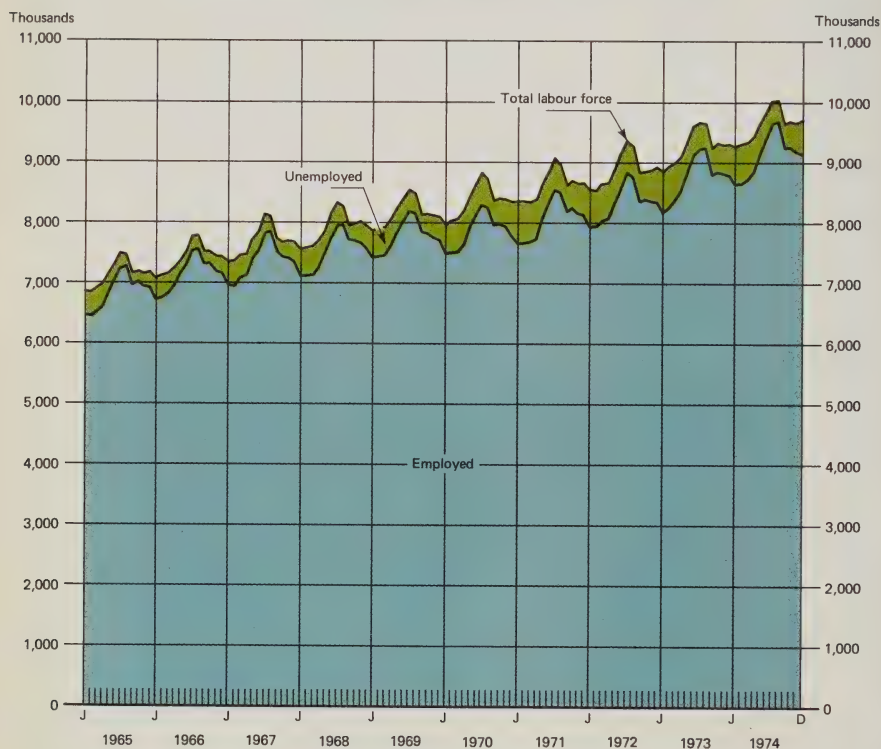


Labour

The Labour Force

In 1974, an average of 58.3 per cent of the Canadian population 14 years of age and over, or a total of 9,662,000 persons, were considered to be in the labour force. Of this total, 9,137,000 were working and an additional 525,000 were unemployed. The chart below shows the growth of the labour force during the 1965-74 period.

The Labour Force, Employed and Unemployed, 1965-74, by Months



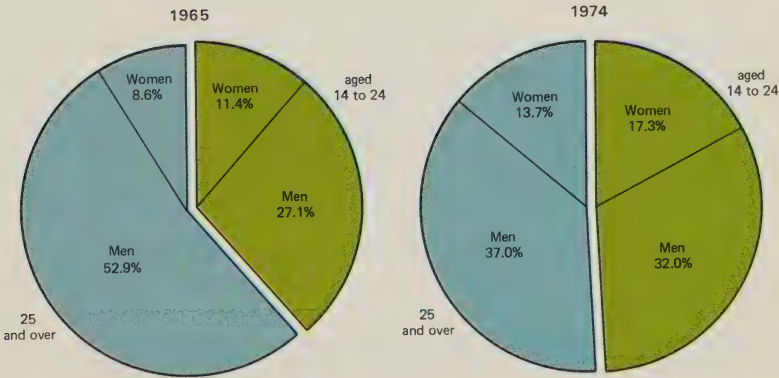
As the following table shows, the increase in the labour force in the 10-year period is attributable to two main factors: population growth (the population aged 14 years and over increased from 13,128,000 in 1965 to 16,562,000 in 1974) and a higher labour force participation rate in the group of young people 14 to 24 years of age and of women over 25. (During this 10-year period, the participation rate increased from 48.1 to 55.9 per cent for the 14-24 age group and from 28.6 to 36.5 per cent in the case of women 25 years of age and over.)

Population and labour force by principal groups by age and sex,
Canada, annual averages 1965 and 1974

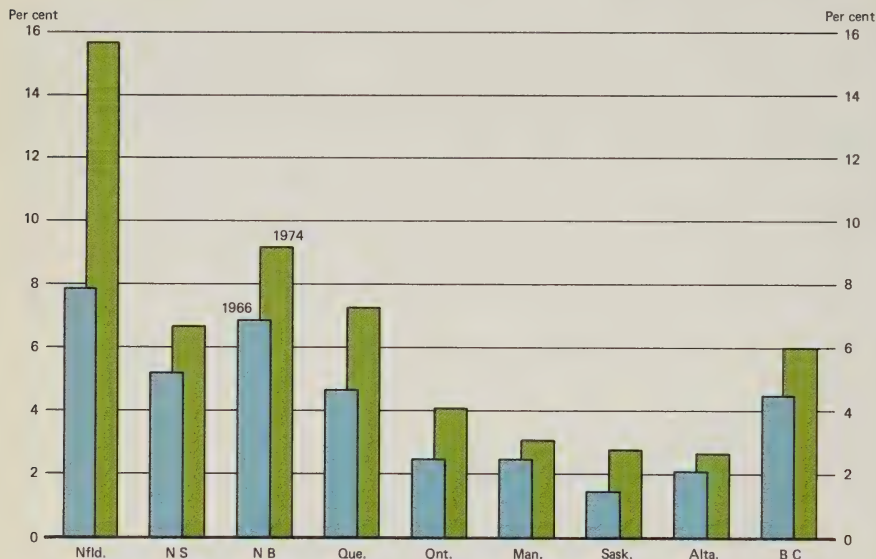
Population and labour force	14-24 years		25 years and over		
	Total '000	'000	Total '000	Male '000	Female '000
Population 14 years and over					
1965	13,128	3,477	9,650	4,759	4,891
1974	16,562	4,783	11,778	5,746	6,032
Labour force					
1965	7,141	1,674	5,468	4,067	1,401
1974	9,662	2,676	6,986	4,784	2,202
Employed					
1965	6,862	1,565	5,296	3,919	1,377
1974	9,137	2,417	6,720	4,591	2,129
Unemployed					
1965	280	108	172	148	24
1974	525	258	266	194	72
Participation rate					
1965	54.4	48.1	56.7	85.5	28.6
1974	58.3	55.9	59.3	83.3	36.5
Unemployment rate					
1965	3.9	6.5	3.1	3.6	1.7
1974	5.4	9.6	3.8	4.1	3.3

The following chart traces the distribution of unemployment by principal age and sex groups over this 10-year period. For example, while the 14-24 age group

Unemployment Distribution by Major Age-Sex Groups, Canada,
1965 and 1974



Unemployment Rate by Province,¹ 1966 and 1974, Annual Averages



(1) Unemployment rate for PEI not provided due to high sampling variability (resulting from small sample size).

accounted for only 39 per cent of the unemployed in 1965, this same group represented almost half (49 per cent) of the total unemployed in 1974.

The chart above shows provincial unemployment rates for 1966 and 1974. As indicated, the 1974 rates were higher but sharp differences between provinces still remained.

Earnings and Hours of Work

Statistics Canada obtains information on average weekly earnings, average weekly hours and average hourly earnings from its monthly survey of employment, earnings and hours in some 54,000 reporting units (usually establishments) in Canada having 20 or more employees in any month of the year. These reporting units account for almost 75 per cent of the total commercial non-agricultural employment in Canada.

Average Weekly Earnings. Average weekly earnings of all employees in all of the industries surveyed were \$178.09 in 1974; this was an 11.0 per cent rise from the 1973 level. The industrial gains ranged from 10.1 per cent in service to 13.0 per cent in mining. Among the provinces, gains ranging from 9.6 per cent in Ontario to 15.5 per cent in New Brunswick were recorded.

**Average weekly earnings for all employees, specified industries, and industrial composite by province¹
annual averages, 1961, 1973 and 1974**

Industry and province	1961	1973 ²	1974 ²	1961 to 1974	1973 to 1974
	\$	\$	\$	%	%
Industry					
Forestry	79.02	197.04	219.86	178.2	11.6
Mining, including milling	95.57	211.42	238.97	150.0	13.0
Manufacturing	81.55	167.48	185.62	127.6	10.8
Durables	88.22	180.41	198.39	124.9	10.0
Non-durables	76.17	154.71	172.86	126.9	11.7
Construction	86.93	225.45	250.30	187.9	11.0
Transportation, communication and other utilities	82.47	181.89	204.39	147.8	12.4
Trade	64.54	126.49	139.92	116.8	10.6
Finance, insurance and real estate	72.82	154.54	172.25	136.5	11.5
Service	57.87	114.53	126.08	117.9	10.1
Industrial composite ¹	78.24	160.46	178.09	127.6	11.0
Industrial composite by province					
Newfoundland	71.06	149.09	168.48	137.1	13.0
Prince Edward Island	54.91	111.17	126.92	131.1	14.2
Nova Scotia	63.72	134.44	149.98	135.4	11.6
New Brunswick	63.62	133.97	154.75	143.2	15.5
Quebec	75.67	154.30	172.89	128.5	12.1
Ontario	81.30	165.61	181.43	123.2	9.6
Manitoba	73.66	144.76	162.71	120.9	12.4
Saskatchewan	74.38	142.28	160.93	116.4	13.1
Alberta	80.29	161.12	178.72	122.6	10.9
British Columbia	84.99	178.22	200.55	136.0	12.5

¹"Industrial composite" is the sum of all industries with the exception of agriculture, fishing and trapping, education and related services, health and welfare services, religious organizations, private households, and public administration and defence. All statistics are based on returns received from employers having 20 or more employees in any month of the year.

²Data for 1973 and 1974 are preliminary.

Average Hourly Earnings.¹ In 1974, average hourly earnings rose 14.1 per cent in mining, 13.5 per cent in manufacturing and 13.6 per cent in construction. By province, average hourly earnings in manufacturing recorded gains ranging from 11.8 per cent in Ontario to 26.7 per cent in Newfoundland.

Average Weekly Hours.¹ From 1973 to 1974, average weekly hours dropped 1.2 per cent in mining, 1.8 per cent in manufacturing and 1.5 per cent in construction. Average weekly hours in manufacturing declined in all provinces in 1974; the drops ranged from 1.2 per cent in Quebec to 6.6 per cent in Newfoundland.

¹ Data on average hourly earnings and average weekly hours pertain only to those wage-earners from whom data on hours are available.

Average hourly earnings and average weekly hours for hourly-rated wage earners, annual averages, 1961, 1973 and 1974

Industry and province	Average hourly earnings			Average weekly hours			Changes in AHE		Changes in AWH	
							1961 to 1973	1973 to 1974	1961 to 1973	1973 to 1974
	1961	1973 ¹	1974 ¹	1961	1973 ¹	1974 ¹	%	%	%	%
	\$	\$	\$	No.	No.	No.				
Industry										
Mining, including milling	2.13	4.82	5.50	41.8	40.9	40.4	158.2	14.1	-3.3	-1.2
Manufacturing	1.83	3.85	4.37	40.6	39.6	38.9	138.8	13.5	-4.2	-1.8
Durables	2.00	4.17	4.69	40.9	40.3	39.5	134.5	12.5	-3.4	-2.0
Non-durables	1.69	3.52	4.03	40.3	39.0	38.3	138.5	14.5	-5.0	-1.8
Construction	2.06	5.66	6.43	40.9	39.5	38.9	212.1	13.6	-4.9	-1.5
Building	2.16	5.88	6.63	38.9	37.9	37.5	206.9	12.8	-3.6	-1.1
Engineering	1.90	5.32	6.30	44.8	42.7	42.3	231.6	18.4	-5.6	-0.9
Manufacturing by province ²										
Newfoundland	1.69	3.29	4.17	40.5	41.1	38.4	146.7	26.7	-5.2	-6.6
Nova Scotia	1.58	3.30	3.87	40.3	39.1	38.2	144.9	17.3	-5.2	-2.3
New Brunswick	1.55	3.23	3.88	40.9	39.3	38.2	150.3	20.1	-6.6	-2.8
Quebec	1.65	3.35	3.87	41.5	40.1	39.6	134.5	15.5	-4.6	-1.2
Ontario	1.94	4.06	4.54	40.5	40.0	39.2	134.0	11.8	-3.2	-2.0
Manitoba	1.67	3.45	3.95	39.7	38.5	37.6	136.5	14.5	-5.3	-2.3
Saskatchewan	1.98	3.94	4.49	39.0	38.6	37.8	126.8	14.0	-3.1	-2.1
Alberta	1.96	4.11	4.66	39.7	38.5	37.4	137.8	13.4	-5.8	-2.9
British Columbia	2.23	4.91	5.66	37.7	37.3	36.4	153.8	15.3	-3.4	-2.4

¹Data for 1973 and 1974 are preliminary.

²Data for Prince Edward Island are not available.

Labour Organizations in Canada

Membership in labour organizations active in Canada totalled approximately 2,610,000 at the beginning of 1973. Of the total civilian labour force, 29.4 per cent were union members. About 71.2 per cent of the members were in unions affiliated with the Canadian Labour Congress (CLC); 6.3 per cent were affiliates of the Confederation of National Trade Unions (CNTU); 1.6 per cent were affiliated with the *Centrale des syndicats démocratiques* (CSD); 0.7 per cent were affiliates of the Confederation of Canadian Unions (CCU); the remaining 20.2 per cent were members of unaffiliated national and international unions and independent local organizations.

Of the total union members, 55.3 per cent belonged to international unions, chiefly AFL-CIO/CLC unions. National unions accounted for 44.7 per cent of union membership in Canada.

Twenty-one unions reported a membership of 30,000 or more in the 1973 survey. The five largest unions are the United Steelworkers of America (173,700); the Canadian Union of Public Employees (167,500); the Public Service Alliance of Canada (133,500); the International Union, United Automobile, Aerospace and Agricultural Implement Workers of America (107,300); and the Quebec Teachers' Corporation (87,500).

Finance

Public Finance

Powers and Responsibilities of the Various Levels of Government

Canada is a federal state with a central government, 10 provincial governments and two territorial governments. Each level of government was assigned specific powers and responsibilities by the British North America (BNA) Act, which forms the written constitution of the country. Thus, this Act gives to the Parliament of Canada the right to raise "money by any mode or system of taxation" and to the provincial legislatures, access to "direct taxation within the province in order to the raising of a revenue for provincial purposes." The BNA Act also empowered the provincial legislatures to make laws regarding "municipal institutions in the province." This means that municipalities derive their incorporation with its associated powers, fiscal and otherwise, from the provincial government concerned.

A direct tax is generally recognized as one which is levied on the very person who should pay it. Income taxes are the most typical example of direct taxes. However, the meaning of direct taxes has been broadened over the years to apply to various sales taxes at the retail level when they are paid by the ultimate purchasers or users of goods and services. The federal government imposes direct taxes on income of individuals and corporations and indirect taxes, such as customs duties, excise taxes and manufacturer's sales taxes. Direct taxes on income are also levied by provincial governments as well as numerous direct taxes on sales of goods and services at the retail level. In turn, municipalities levy real property taxes and other taxes on water consumption and places of business.

National defence and postal services are the main areas of exclusive federal spending activity. In addition, large federal outlays are incurred for transportation and communications, as well as for social welfare. Provincial government expenditure is particularly heavy in the areas of transportation and communications, health, social welfare, education, natural resources and primary industries. Local government expenditure is concentrated on protection of persons and property, education, public works, sanitation and waterworks.

Organization of Governments

The organization of governments is not uniform from one level to another nor is it uniform among governments at the same level. Each government operates its affairs in the manner that it finds most convenient to its resources and most suitable to the discharge of its responsibilities. The resulting differences in the organizational structures of the various governments raise problems if one seeks to compare one government with another. However, in consolidating the transactions of all levels of government in order to form only one governmental universe, a measure of the collective impact of government upon the general public can be obtained, as illustrated in the first column of Tables 1 and 2.



Intergovernmental Fiscal Arrangements

Fiscal arrangements between the federal, provincial and territorial governments take various forms and are governed either by an Act of Parliament or by formal agreements between levels of government. The most important arrangements can best be described under three types: general purpose transfer payments, tax collection agreements and specific purpose transfer payments.

General purpose transfers refer to payments from one level of government to another level without specific conditions attached. Statutory subsidies, established by the BNA Act, 1867, consist of contributions by the federal government toward the support of the government and legislature of the provinces. They include an allowance per head of population, allowances for interest on debt and other special amounts as agreed upon under the terms of the union and subsequent to the union.

The federal government shares with the provinces 95 per cent of the amounts of the federal corporation income tax collected from non-government electrical and gas utilities operating within each province. The intent of this policy is to make available to provinces tax revenue from companies engaged in the exploitation of provincial natural resources.

The most important payments included in general purpose transfers are made under the equalization program. This program was established in 1967 and slightly revised in 1972. This revision, however, did not modify the basic philosophy of the program according to which all Canadian citizens are entitled to a standard of public services that is fairly comparable among the various regions of the country. In a country as vast as Canada, natural resources and economic wealth are unevenly distributed across the country. Thus, through the equalization system, the federal government makes available, from its general revenue collected in all provinces, part of the nation's wealth to provinces with income lower than the national average income.

Under tax collection agreements, the federal government collects for all provinces (Quebec excepted) provincial individual income taxes and provincial corporation income taxes (Quebec and Ontario excepted). Quebec imposes and collects its own personal income tax and its corporation income tax as does Ontario for the latter.

The federal government withdrew from the death and gift tax fields as of December 31, 1971. Since the federal estate tax had been shared with the provinces, whether or not they themselves levied succession duties, the federal withdrawal from this field of taxation meant a potential loss of revenue to provinces without succession duties. For such provinces the federal government agreed to collect (for three years) any succession duties and gift taxes they might wish to levy.

Quebec, Ontario and British Columbia which had been imposing and collecting succession duties have maintained their own system and, in 1972, began to levy a gift tax. Ontario and British Columbia chose to have their gift tax collected by the federal government. The remaining provinces (with the exception of Alberta which has no succession duties or gift taxes) enacted succession duty and gift tax legislation effective January 1, 1972. Subsequently, Prince Edward Island rescinded, retroactively to January 1, 1972, its related statutes; New Brunswick made its

legislations ineffective on deaths and gifts occurring after December 31, 1973, and Nova Scotia and Newfoundland did likewise in April 1974.

The last type of arrangement, generally referred to as specific purpose transfer payments, takes three forms: the federal government contributes financial assistance to a program administered by a province; the federal and provincial governments each assume the sole responsibility for the construction, administration and financing of separate aspects of a joint project; or the province contributes financially to a joint program administered by the federal government.

In the first category are most of the federal-provincial joint programs in the field of social policy, such as public hospital insurance programs and the Canada Assistance Plan.

Joint programs in the second category—those in which the federal and provincial governments accept sole responsibility for portions of a total project—are not numerous and are generally of a public works nature, such as irrigation projects. Programs in the third category are also few in number and the sums of money involved are seldom large.

In 1965, provinces were given the option to assume full financial and administrative responsibility for certain programs in return for fiscal compensation and to this end, the federal government enacted in April 1965 the Established Programs (Interim Arrangements) Act. This Act was designed to provide for an interim period during which a province might assume greater administrative and financial responsibility for programs enumerated in the Act and during which time more permanent arrangements governing joint programs might be devised. Quebec alone availed itself of the provisions of this legislation and, consequently, is granted a larger proportion of the federal income tax field than that prevailing in the other provinces.

Financial Transactions of the Various Levels of Government in the Fiscal Year Ended Closest to December 31, 1972

Tables 1 to 4 provide information on the revenue, expenditure, assets and liabilities of the various levels of government for the fiscal year that ended closest to December 31, 1972. The fiscal year concerned is the period April 1, 1972 to March 31, 1973 for the federal and provincial governments and January 1, 1972 to December 31, 1972 for most local governments.

The data are cast in the financial management statistical framework which makes use of the financial statements of the various governments as its main source of information. This framework also standardizes government operations in order to arrive at statistics that are comparable among governments and between levels of government. As a result, the data presented differ from the related transactions reported in the financial statements of the individual governments.

Federal Government Transactions

In the fiscal year ended closest to December 31, 1972, the federal government derived a revenue of \$21,426,274,000 and incurred an expenditure of \$20,912,031,000. It thus realized a surplus of \$514,243,000, much of it attributable



Income tax returns processed by key punching (above) and direct data entry operations (below).



to the operations of the Canada Pension Plan. Of the federal revenue, 39.1 per cent was obtained from personal income tax, 13.6 per cent from corporation income tax and 14.2 per cent from general sales tax; these three sources accounted for 66.9 per cent of the total federal revenue. Social welfare, transfers to other levels of government, and protection of persons and property (mainly national defence) accounted

for 30.4, 22.2 and 11.0 per cent respectively (63.6 per cent collectively) of the total federal expenditure.

The financial assets of the federal government amounted to \$37,778,652,000 and its liabilities to \$42,018,419,000 at March 31, 1973. Of its financial assets, 57.2 per cent were in the form of loans and advances and 35.7 per cent pertained to investments in securities while 69.1 per cent of its liabilities related to bonds and debentures, and 17.2 per cent to payables.

Provincial Governments' Transactions

In the fiscal year 1972-73, the revenue of provincial governments amounted to \$18,900,428,000 and their expenditure came to \$19,063,896,000 leaving them with a deficit of \$163,468,000. The levies on personal income, general sales, motive fuel and corporation income, and health insurance premiums provided 19.2, 12.3, 6.7, 5.2 and 3.7 per cent respectively (47.1 per cent collectively) of the total provincial revenue. Provincial governments also obtained 24 per cent of their revenue in the form of transfers from other levels of government (mainly from the federal government). Health, transfers to other levels of government, education and social welfare

The sole right to issue notes intended for circulation is vested in the Bank of Canada.





CEGEP students from Chicoutimi, Que., visiting the Canadian Forces base at Bagotville, Que. National defence and postal services are the main areas of exclusive federal spending activity.

accounted for 27.1, 18.6, 11.8 and 9.9 per cent respectively (67.4 per cent collectively) of the total provincial expenditure.

On March 31, 1973, the financial assets of provincial governments stood at \$18,138,004,000 and their liabilities at \$19,491,707,000. Of their financial assets 51.6 per cent were in the form of investments in securities and 16.9 per cent related to loans and advances while 85.2 per cent of their liabilities were covered by bonds and debentures.

Local Governments' Transactions

During the fiscal year ended closest to December 31, 1972, local governments derived a revenue of \$9,578,081,000 and incurred an expenditure of \$10,279,689,000. They thus accumulated a deficit of \$701,608,000. Real property taxes and transfers from other levels of government (mainly from provincial governments) produced 38.1 and 47.3 per cent respectively of total local government revenue. Education, transportation and communications, protection of persons and property, and environment accounted for 44.8, 11.8, 7.4 and 7.4 per cent respectively (71.4 per cent collectively) of total local government expenditure.

At the end of the fiscal year, the financial assets of local governments amounted to \$2,790,189,000 and their liabilities at \$11,479,563,000. The bulk of their financial assets were in the form of receivables and investments in securities (39.5 and 34.5 per cent respectively) while their liabilities related mostly to bonds and debentures (84.7 per cent of the total).

Table 1. Revenue of federal, provincial and local governments
(fiscal year ended closest to December 31, 1972)

Sources of revenue	All governments		Federal government		Provincial governments		Local governments	
	Consolidated (excludes intergovernmental transactions) \$'000		Amount	Share of total revenue %	Amount	Share of total revenue %	Amount	Share of total revenue %
Taxes:								
Personal income taxes	12,007,267		8,378,408	39.1	3,628,859	19.2	...	...
Corporation income taxes	3,897,482		2,919,513	13.6	977,969	5.2	...	...
General sales taxes	5,382,742		3,051,722	14.2	2,331,020	12.3	—	—
Real property taxes	3,707,760		...	...	59,631	0.3	3,648,129	38.1
Customs duties	1,181,837		1,181,837	5.5	...	...	...	...
Motive fuel taxes	1,270,714		...	...	1,270,714	6.7	...	...
Health insurance premiums	700,819		...	...	700,819	3.7	...	...
Social insurance levies ¹	1,142,354		741,565	3.5	400,789	2.1	...	...
Universal pension plan levies ²	1,210,480		879,164	4.1	331,316	1.8	...	...
Other taxes	2,649,513		1,389,073	6.5	896,329	4.8	364,111	3.8
Sub-total	33,150,968		18,541,282	86.5	10,597,446	56.1	4,012,240	41.9
Natural resources	799,538		11,005	0.1	788,533	4.2	...	...
Privileges, licences and permits	746,968		22,401	0.1	628,077	3.3	94,490	1.0
Other revenue from own sources	5,893,523		2,851,586	13.3	2,340,978	12.4	938,102	9.8
General purpose transfers from other levels of government	—		—	—	1,494,216	7.9	456,811	4.8
Specific purpose transfers from other levels of government	—		—	—	3,051,178	16.1	4,076,438	42.5
Total	40,590,997		21,426,274	100.0	18,900,428	100.0	9,578,081	100.0

¹Covers contributions for workmen's compensations, unemployment insurance and vacation-with-pay schemes.

²Covers contributions to the Canada and Quebec Pension plans.

...Not applicable.

—Nil or zero.

Table 2. Expenditure of federal, provincial and local governments
(fiscal year ended closest to December 31, 1972)

Expenditures	All governments		Federal government		Provincial governments		Local governments	
	Consolidated (excludes intergovernmental transactions) \$'000		Amount \$'000	Share of total expenditure %	Amount \$'000	Share of total expenditure %	Amount \$'000	Share of total expenditure %
General government	2,506,136		1,254,805	6.0	889,294	4.7	363,034	3.5
Protection of persons and property ¹	3,650,040		2,295,658	11.0	649,408	3.4	761,756	7.4
Transportation and communications	4,084,191		1,320,238	6.3	1,548,570	8.1	1,215,384	11.8
Health	5,477,993		151,900	0.7	5,163,379	27.1	502,466	4.9
Social welfare	8,665,608		6,364,708	30.4	1,890,898	9.9	410,002	4.0
Education	6,953,040		284,730	1.4	2,240,541	11.8	4,605,033	44.8
Environment	992,322		72,796	0.4	156,810	0.8	758,282	7.4
General purpose transfers to other levels of government	—		1,640,075	7.8	414,631	2.2	—	—
Specific purpose transfers to other levels of government	—		—	—	—	—	—	—
for transportation and communications	—		49,265	0.2	297,551	1.6	20,750	0.2
for health	—		1,637,079	7.8	37,006	0.2	960	—
for social welfare	—		493,499	2.4	247,322	1.3	21,781	0.3
for education	—		562,389	2.7	2,799,696	14.7	76	—
for other purposes	—		266,149	1.3	168,577	0.8	2,795	—
Sub-total — Specific purpose transfers	—		3,008,381	14.4	3,550,152	18.6	46,362	0.5
Other expenditure	8,679,224		4,518,740	21.6	2,560,213	13.4	1,617,370	15.7
Total expenditure	41,008,554		20,912,031	100.0	19,063,896	100.0	10,279,689	100.0

¹Includes national defence.
— Nil or zero.

Table 3. Financial assets of federal, provincial and local governments
(fiscal year ended closest to December 31, 1972)

Financial assets	Federal government			Provincial governments			Local governments		
	Amount	Share of total financial assets	%	Amount	Share of total financial assets	%	Amount	Share of total financial assets	%
	\$'000			\$'000			\$'000		
Cash on hand or on deposit	1,294,401	3.4		2,170,547	12.0		506,225	18.1	
Receivables	373,085	1.0		930,946	5.1		1,102,657	39.5	
Loans and advances	21,622,945	57.2		3,060,814	16.9		1,298	0.1	
Investments									
(a) Canadian securities	13,076,668	34.6		9,362,996	51.6		961,267	34.5	
(b) Foreign securities	414,000	1.1		...	...		...	...
Sub-total investments	13,490,668	35.7		9,362,996	51.6		961,267	34.5	
Other financial assets	997,553	2.7		2,612,701	14.4		218,742	7.8	
Total	37,778,652	100.0		18,138,004	100.0		2,790,189	100.0	

Table 4. Liabilities of federal, provincial and local governments
(fiscal year ended closest to December 31, 1972)

Financial liabilities	Federal government			Provincial governments			Local governments		
	Amount	Share of total liabilities	%	Amount	Share of total liabilities	%	Amount	Share of total liabilities	%
	\$'000			\$'000			\$'000		
Borrowing from financial institutions .....	...	...		323,170	1.7		898,693	7.8	
Payables	7,241,173	17.2		963,208	4.9		627,711	5.5	
Loans and advances	370,279	0.9		1,052,256	5.4		—	—	
Bonds and debentures	29,038,493	69.1		16,613,087	85.2		9,722,041	84.7	
Other liabilities	5,368,474	12.8		539,986	2.8		231,118	2.0	
Total	42,018,419	100.0		19,491,707	100.0		11,479,563	100.0	

Banking and Savings

The Canadian monetary system is a decimal currency with 100 cents to the dollar. Currency in the form of bills is issued by the Bank of Canada. The coinage—nickel coins in denominations of one dollar, 50 cents, 25 cents, 10 cents, 5 cents and bronze 1-cent coins—is issued by the Royal Canadian Mint. At the end of 1974, Bank of Canada notes totalling \$5,213 million and coins totalling \$656 million were in circulation outside banks.

Although many economic transactions in Canada involve payments made in the form of Bank of Canada notes and coin, an increasing proportion of payments, and certainly virtually all large ones, are made by cheque. A cheque is an order addressed to a bank to pay a third person named in the cheque a specified amount out of the deposit account maintained at that bank by the person writing the cheque. Deposit liabilities held at the chartered banks are considered a convenient means of settling transactions and are usually thought of as money because they are generally accepted in the settlement of debts.

The banks offer three types of chequable accounts: current accounts and personal chequing accounts on which no interest is paid, and chequable personal savings accounts on which interest is paid. There are also non-chequable savings accounts on which the banks pay a higher rate of interest and various types of term deposits. The banks as a group operate extensive facilities for clearing cheques drawn on one bank and cashed in another. On April 30, 1974, the chartered banks had 26,156,325 deposit accounts with an average of \$1,881 in each account.

Banks

There are 10 chartered banks operating in Canada and their shares are, for the most part, held by a large number of individual Canadians. The majority of these banks have been in operation for many years but one new bank commenced operations in July 1968 and another in January 1973. All of the banks operate under charters granted by Parliament under the terms of the Bank Act. Each of the banks has a number of branches and in the largest banks the branch network extends throughout the country. As of December 1974, the banks operated a total of 6,878 branches in Canada. By the yardstick of total assets the two largest Canadian banks were among the top 40 banks in the world in 1973.

The chartered banks are one of the major sources of financing in Canada. They also offer their customers a wide variety of other services, including facilities for obtaining foreign exchange, investing in stocks and bonds and protecting valuables. Bank loans are made to businessmen and consumers for a variety of purposes and for varying periods of time. Most loans are relatively short-term but in recent years there has been a quite rapid increase in longer term loans to businesses and in mortgage loans on residential property. The chartered banks are required by law to maintain cash reserves in the form of deposits with, or notes of, the Bank of Canada and may also be required to maintain secondary reserves. The Bank of Canada performs the function of a banker for the chartered banks and is empowered to make short-term advances to the banks.

Many of the chartered banks are also active in international business and provide

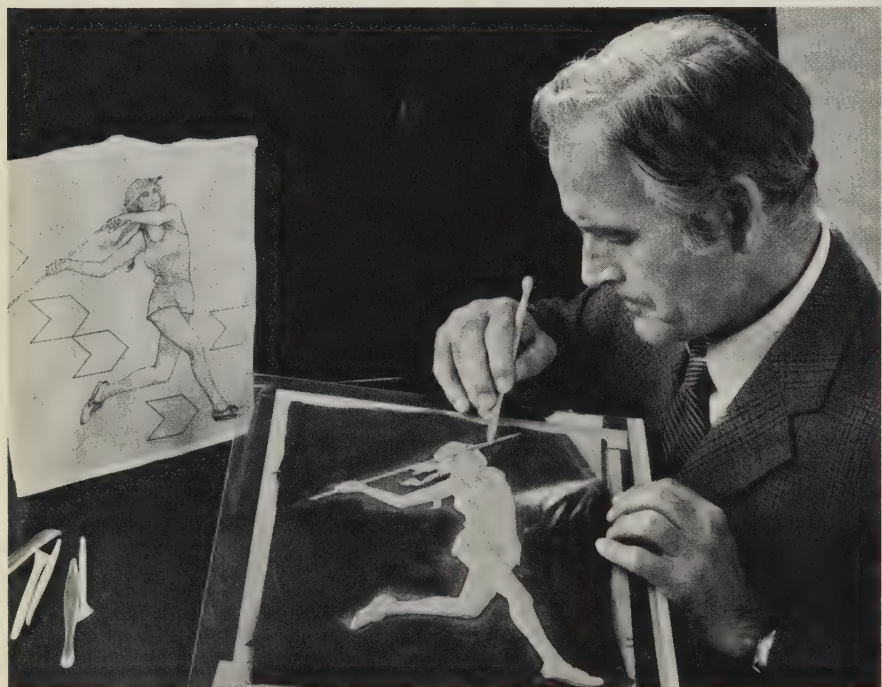
domestic banking services in a number of other countries. The banks maintained 278 branches and agencies outside Canada, as of December 1974.

Non-bank Financial Institutions

In 1974, the assets of the banks accounted for some 60 per cent of the total assets of the major Canadian financial intermediaries. Their main competitors are trust companies, mortgage loan companies, *caisses populaires*, credit unions, the Quebec Savings Bank, and sales finance and consumer loan companies. Insurance companies and investment dealers and stockbrokers also play important roles in the Canadian financial system.

While the chartered banks remain the largest financial institutions in Canada, the postwar period has witnessed the rapid growth and development of competing institutions. Among the fastest growing in recent years have been the 100 or so trust companies and mortgage loan companies, which operate across Canada. Both

In the preliminary stages of making a coin die, the Royal Canadian Mint's engraving department checks the contours of a three-dimensional plasticine cast modelled from the two-dimensional original artist's drawing.





Bank of Canada building in Ottawa, Ont.

institutions accept deposits and have networks of branches. Although they compete with the banks to attract personal savings deposits, most of their funds are raised through the sale of fixed-term debentures and investment certificates. The bulk of the assets of both trust and mortgage loan companies is held in the form of mortgages. Trust companies, in addition, administer private and corporate pension funds and the estates of individuals, manage companies in receivership and act as financial agents for municipalities and corporations. Trust and mortgage loan companies are licensed and supervised either by the federal Department of Insurance or by provincial authorities.

Another important type of financial intermediary in Canada is the credit union or *caisse populaire* as it is called in Quebec. The *caisses populaires* began operations around 1900 and acted mainly as savings institutions for lower income groups. Later, *caisses populaires* began lending to members at low cost. Unlike the chartered banks, the first of which were established in the early part of the 19th century, most of the credit unions and *caisses populaires* have been formed during the past 40 to 50 years. Their growth has been due in large measure to their co-operative

foundation and to their local character—a striking contrast to the development of many other financial institutions.

The Bank of Canada

Canada's central bank, the Bank of Canada, is charged with the responsibility for regulating "credit and currency in the best interests of the economic life of the nation." The chartered banks are required to maintain on a half-monthly basis cash reserves in the form of Bank of Canada notes and deposits with the Bank of Canada equal to 12 per cent of demand deposits and 4 per cent of notice deposits. In addition, the Bank of Canada may also require the banks to maintain secondary reserves consisting of excess cash reserves, treasury bills and day-to-day loans. The Bank of Canada implements its monetary policy primarily by varying the amount of cash reserves available to the banking system. An increase in cash reserves, relative to the requirement, will encourage the banks as a group to expand their loans and investments with a concomitant increase in their deposit liabilities, while a decrease in cash reserves will have the opposite effect of inhibiting the banks from expanding their activities or even of inducing a contraction in their total asset and deposit liabilities. The principal means used by the Bank of Canada to alter the level of chartered bank cash reserves over time is through changes in its portfolio of Government of Canada securities.

The Bank may make short-term advances to chartered banks and the Government of Canada. The minimum rate at which the Bank is prepared to make advances is called the bank rate, and legislation requires that it be made public at all times. The Bank acts as fiscal agent for the Government of Canada; it operates the government's deposit account through which flow virtually all government receipts and expenditures, handles debt management and foreign exchange transactions for the government and acts as an economic and financial adviser. The sole right to issue notes intended for circulation in Canada is vested in the Bank.

Insurance

At the end of 1973, Canadians owned over \$167,000 million of life insurance, with an average of \$25,900 in force per household. Canadians are well insured compared to people in other countries.

The Canadian life insurance business consists of about 240 companies and fraternal benefit societies, over half of which are federally registered companies. The latter group of companies has written more than 90 per cent of the total business of the industry and holds assets in Canada of about \$20,000 million. In addition to life insurance, most of the companies sell policies to cover expenses resulting from illness and to compensate policyholders for wages not received during illness. Insurance may be purchased from a licensed insurance salesman or through a "group" plan operated by an employer, a professional association, a union, etc.

In addition to those companies selling life insurance about 330 companies sell property, automobile, liability and other casualty lines. The federally registered companies selling such insurance have assets in Canada of almost \$3,000 million.

Trade

Domestic Trade

The means by which goods are transferred from the producer and from secondary sources (for example, importers) to the final consumer are usually referred to as the channels of distribution. The principal channels are wholesalers and retailers. Generally, retailers are those engaged in selling to the household consumers or individuals for their personal use. Wholesalers are primarily engaged in buying merchandise for resale to retailers; to industrial, commercial, institutional or professional users; to other wholesalers; or in acting as agents in connection with such transactions. Included with wholesalers are agents and distributors who sell on commission. Manufacturers' sales branches may engage in either a wholesale or a retailing activity or both.

In addition to retailing outlets, retailing functions are carried out through vending machines and through direct selling such as mail-order and door-to-door selling. Co-operatives also carry out a variety of distributive and other functions. Finally there are avenues for the performance of services to consumers, industry and business. This service trade includes accommodation; restaurants; recreational, amusement and entertainment facilities; the rental of equipment; management



research advertising, consulting, data processing; and many other specialized service functions. The foregoing channels of distribution will be briefly discussed, including consumer credit, which is an important adjunct to the entire marketing process.

The nature and activities of the channels of distribution are characterized by continuous change. In retailing and services, franchising operations appear to be multiplying. Planned shopping centres have sprung up in the suburbs of cities. In the central business district, merchants are locating their stores in newly constructed shopping malls and multi-store, multi-level building developments which house retail and service outlets. Independent store owners are forming voluntary groups that engage in joint advertising and centralized purchasing in order to compete more effectively with corporate retail chains. The gasoline industry engages in mail-order selling and the retailing of appliances and household and sporting goods. Businesses are making extensive use of specialized agencies many types of which have come to prominence only in recent years, such as data processing services, market research agencies, public relations firms, mailing list houses, and marketing and management consultants.

Retail Trade

In 1974, retail sales through regular outlets reached an estimated total of \$43,819.3 million, an increase of 14.6 per cent over 1973. Retail sales data do not include vending machines, direct sales (mail-order, door-to-door and so on), and campus bookstores. These three categories were estimated to account for \$1,291 million in 1973.

Retail sales in 1974 were 56.3 per cent above those of 1970. The largest sales increases for the five-year period, 1970-74, were recorded in Saskatchewan (73.2 per cent) and British Columbia (68.4 per cent), while Quebec and Ontario showed the lowest rates of increase, 53.3 per cent and 50.7 per cent respectively. Although both Ontario's and Quebec's rate of increases were below the national average, these provinces accounted for 37.4 per cent and 24.7 per cent respectively of all retail sales in Canada for 1974.

By kinds of business, the most substantial increase in sales for the period 1970-74 was recorded by motor vehicle dealers (81.2 per cent), followed by department stores with an increase of 77.4 per cent over the five-year period.

The largest sales volume by kind of business was accounted for by grocery and combination stores, 23.6 per cent of total retail sales in 1974. The rate of increase of sales of this kind of business for the period 1970-74 was 51.1 per cent which was below the national average of 56.3 per cent for the same period. Motor vehicle dealers (including their repair and maintenance business, and new and used car sales) captured the second largest share of total retail sales in 1974, with 17.4 per cent of the total retail market. Motor vehicle dealers' sales were 12.4 per cent higher in 1974 than in 1973, and were up 81.2 per cent for the five-year period, 1970-74. Department stores which accounted for the third largest segment of total retail sales in 1974 captured 11.5 per cent of all retail sales in Canada, up from the 10.2 per cent recorded in 1970. The lowest rates of increase for the period 1970-74 were registered by variety stores (27.1 per cent) and shoe stores (30.3 per cent).



By-Ward market in downtown Ottawa, Ont.

Within the framework of retail trade, chain stores (four stores or more in the same kind of business under one owner) and independent retailers compete for a share of the retail market. There is a clear indication of a steady increase in the share of sales (in retail trade) by the chain stores. In 1970, chains accounted for 37.8 per cent of total retail sales, but by 1973 had increased their market share to 39.6 per cent and to 40.7 per cent in 1974. Some of this increase was due to the sharp rate of sales increase of department stores (all of which are classed as chains). Without department stores, the market share of chains in 1970 was 27.6 per cent and 29.2 per cent in 1974.

Total sales of independent stores in 1974 were estimated at almost \$26,000 million and those of chains at \$17,800 million. Sales by chains in 1974 were 17.8 per cent above those of 1973, while the increase of independents for the same period was 12.5 per cent.

In 1970, grocery and combination store chains had a 51.4 per cent share of total sales of that kind of business. By 1974, their share had increased to 57.5 per cent; grocery and combination store chains now command appreciably more business

than independents. In fact, in most kinds of business, chains gained at the expense of independents for the period 1970-74. Exceptions were variety stores and motor vehicle dealers.

Direct Selling

In addition to retail trade sales through regular retail outlets—department stores, chain stores and independent retail stores—a considerable volume of consumer goods are purchased by household consumers through other channels of distribution which completely bypass the regular retail outlet. Direct selling is typified by retailing done by primary producers, manufacturers, importers, wholesalers, specialized “direct sellers” and vending machine operators through channels such as catalogue and mail-order sales, door-to-door canvassing, home-deliveries, houseparties and purchases through automatic vending machines.

In 1973 consumers made “mail-order” purchases of books, newspapers and magazines, phonograph records, household appliances, jewellery, cameras, watches, radios, etc., amounting to \$154.7 million; they also made purchases from door-to-door canvassers and home-delivery tradesmen of cosmetics, costume jewellery, household electric appliances, vacuum cleaners, dinnerware, kitchenware, household cleaners, brushes, books, and household staples, such as bread, milk, dairy products and newspapers totalling \$655.8 million. In addition they purchased \$189.9 million of consumer goods directly from showrooms and premises of manufacturing companies and primary producers, \$50.0 million at campus bookstores, and a further \$33.6 million at exhibitions, shows, roadside stands, market stalls, etc. On their purchases through automatic vending machines consumers spent another \$207.1 million in 1973. In total these expenditures contributed an extra \$1,291.2 million to the \$38,239.2 million consumers spent in retail trade in the same year.

Consumer credit Balances outstanding—selected holders—selected year-ends (million dollars)

Credit holders/types of credit	1954	1964	1969	1973	1974
Sales finance and consumer loan companies:					
Instalment financing	506	1,089	1,371	1,151	1,198
Cash loans under \$1,500	89	575	596	341	298
Cash loans over \$1,500	112	275	1,079	1,421	1,507
Chartered banks' personal loans	351	1,793	4,157	8,878	10,817
Quebec savings banks' personal loans	2	15	24	36	44
Life insurance companies' policy loans	240	398	660	884	1,060
Credit unions and (caisses populaires)	151	705	1,401	2,420	2,830
Department stores and other retail dealers	685	1,236	1,529	1,985	2,162
Other credit card-issuers	—	59	153	249	275
Public utility companies	—	111	164	242	268
Trust and mortgage loan companies	—	—	—	82	145
Total	2,136	6,254	11,134	17,688	20,606

Consumer Credit

Consumer credit refers to advances made to individuals for non-commercial purposes of cash or credit against specific purchases of consumer goods under contractual sales agreements, or through use of credit cards, by firms extending such credit in exchange for a promise of payment at a later date, generally by instalments. The statistics on consumer indebtedness do not include fully-secured loans, home-improvement loans or residential mortgages. Nor do they include data on interpersonal loans, bills owed to dentists and other professional practitioners, or amounts owing to clubs and personal service establishments, as statistics on these latter forms of consumer credit are unavailable.

The accompanying Table shows national estimates of consumer credit as measured by the outstanding balances in the hands of selected holders of such credit for selected year-ends spanning the last two decades.

During 1974 consumer credit outstanding grew by 16.5 per cent, increasing by almost \$3,000 million. This expansion in consumer credit indicates that consumers financed 3.7 per cent of the \$79,633 million they spent on consumer goods and services during 1974 and total consumer indebtedness amounted to 23.4 per cent of the \$88,105 million disposable income.

From the accompanying Table it can be seen that there have been some significant shifts in the "market-share" of the financial and other institutions serving the needs of consumers for credit over the past 20 years. In 1954 retail vendors — department stores and other retail outlets — supplied almost a third of all consumers' needs for credit, as did sales finance and consumer loan companies, while the banks and credit unions between them supplied in aggregate 23.6 per cent of consumers' cash needs. In 1964 the "market-share" of retail trade outlets had shrunk over 12 percentage points to 19.7 per cent, while that of the chartered banks had expanded by a like amount to reach a 28.9 per cent share. The share of credit unions and *caisses populaires* had by then expanded to 11.3 per cent, and the sales finance and consumer loan companies remained close to their earlier share at 31.0 per cent. In 1974 the chartered banks held more than half of all balances outstanding, 52.7 per cent, and the share of credit unions and *caisses populaires* had also grown, to 13.7 per cent. The retail trade sector however had declined to 10.5 per cent and the share of sales finance and consumer loan companies had shrunk to 14.6 per cent.

Wholesale Trade

Wholesalers are primarily engaged in buying merchandise for resale to retailers; to farmers for use in farm production; to industrial, institutional and commercial users; to other wholesalers; for export or, acting as agents in such transactions. For statistical purposes, wholesalers are classified into five types: wholesale merchants; agents and brokers; manufacturers' sales branches; assemblers of primary products; and petroleum bulk tank plants and truck distributors. Of these five types, wholesale merchants, who account for over 60 per cent of wholesale sales are the most important. They buy and sell merchandise on their own account. Included in

this category are import and export merchants, cash and carry wholesalers, drop-shippers, truck distributors, mail-order wholesalers, desk jobbers, rack jobbers and simply jobbers. The accompanying Table shows estimated sales of wholesale merchants for 1973 and 1974 by kind of business groups, as measured by a sample of reporting firms.

Estimated sales of \$43,210 million in 1974 for all trade groups were 26.8 per cent greater than the \$34,081 million in 1973. Some of the larger increases were registered in the industrial goods trades which showed an increase of 35.7 per cent with sales of \$24,344 million in 1974 while the consumer goods trades with sales of \$18,866 million were 16.9 per cent above 1973.

Service Trades

Changes within the service sector can best be measured and analyzed through census results, since intercensal surveys provide only partial coverage of this large and diverse field. From 1961 to 1966, the service trades developed at a faster rate than either personal disposable income or personal consumer expenditure. By 1966, the receipts of service trades amounted to \$4,587 million, of which the hotel, tourist camp and restaurant group accounted for \$2,397 million, the personal

Specialty shops offer products from other countries.



services group for \$596 million, the amusement and recreation group for \$442 million and the business services group for \$492 million. Since 1966, restaurant receipts increased by 64.3 per cent to \$1,771.5 million in 1974; accommodation receipts reached \$1,708.0 million in 1972 of which hotel receipts amounted to \$1,376.7 million, a 74.2 per cent increase; power laundries and dry cleaners reported receipts of \$282.4 million in 1973, an increase of 11.5 per cent and receipts from motion picture theatres in 1973 amounted to \$161.7 million (including taxes), up 60.3 per cent. Other services including advertising agencies, motion picture production and motion picture distribution showed increases between 1966 and 1973 amounting to 53.7 per cent, 177.7 per cent and 43.4 per cent respectively.

Wholesale trade (merchants), 1973 and 1974

	Sales		Percentage change 1973/74
	1973 \$'000,000	1974 \$'000,000	
Total, all trades	34,081.2	43,210.2	26.8
Consumer goods trades	16,135.9	18,866.1	16.9
Automotive parts and accessories	2,060.4	2,529.2	22.8
Motor vehicles	841.8	917.2	9.0
Drugs and drug sundries	754.7	892.6	18.3
Clothing and furnishings	358.2	396.2	10.6
Footwear	83.3	96.0	15.2
Other textiles and clothing accessories	705.3	851.3	20.7
Household electrical appliances	801.6	897.0	11.9
Tobacco, confectionery and soft drinks	1,182.5	1,342.7	13.5
Fresh fruits and vegetables	653.2	751.3	15.0
Meat and dairy products	1,060.7	1,083.2	2.1
Floor coverings	369.6	424.3	14.8
Groceries and food specialties	4,799.7	5,804.0	20.9
Hardware	754.7	903.8	19.8
Consumer goods residual	1,710.4	1,977.5	15.6
Industrial goods trades	17,945.3	24,344.1	35.7
Coal and coke	43.1	69.7	61.7
Grain	2,098.9	4,267.3	103.3
Electrical wiring supplies, construction materials, apparatus and equipment	626.3	798.2	27.5
Other construction materials and supplies, including lumber	4,719.7	5,358.1	13.5
Farm machinery	1,258.8	1,607.0	27.7
Industrial and transportation equipment and supplies	3,168.7	3,888.5	22.7
Commercial, institutional and service equipment and supplies	789.1	940.5	19.2
Newsprint, paper and paper products	518.9	694.3	33.8
Scientific and professional equipment and supplies	407.8	482.9	18.4
Iron and steel	1,758.2	2,736.3	55.6
Junk and scrap	619.6	1,024.2	65.3
Industrial goods residual	1,936.1	2,477.1	27.9

Co-operatives

The co-operative movement is active in all 10 provinces of Canada. It had its beginnings at a number of different places in the country in the latter half of the 19th century but was most readily adopted in the rural areas. Here, with a sparse population and in many instances sparse competition, a great many farmers were dissatisfied with the treatment they received in their dealings with existing commercial trade channels. This applied both to the marketing of farm produce and to the purchase of farm supplies and consumer goods. Thus the movement evolved as largely agricultural and rural; it is only in the last two decades or so that significant progress has been made in the urban sector with the establishment of co-operative supermarkets and shopping centres.

Co-operatives other than credit unions, insurance and recreational associations can be divided into five basic groups according to their principal economic activity. Marketing and purchasing, which market members' produce and sell merchandise and supplies to them; production; fishermen's; service; and wholesale. The first four groups are known as local co-operatives, as they deal directly with individuals. Total business volume in 1973 for 2,255 locals soared to a record breaking \$3,565 million, an increase of \$773 million or 28 per cent over the previous year. Business volume consists of four broad revenue categories (with accompanying figures for 1973): farm product marketings, \$2,265 million; sales of merchandise and supplies \$1,188 million; revenue from services, \$84 million; and miscellaneous income \$28 million.

Grain, the volume leader in farm product marketings, climbed to a new high of \$1,108 million in 1973 and accounted for \$300 million or about two fifths of the over-all gain in business volume. Other marketings include dairy products, \$514 million; livestock, \$395 million; and fruits and vegetables, poultry and eggs, fish, honey, maple products and lumber. Co-operatives sell a broad variety of consumer goods and farm supplies of which the largest in 1973 were: food products, \$359 million; feed, \$237 million; petroleum, \$169 million; and hardware, \$103 million. Services by co-operatives include rural electrification, medical insurance, housing, transportation, cold storage and seed cleaning. Miscellaneous income includes interest, patronage dividends and rent. Saskatchewan continued as the province with the largest co-operative business volume at \$1,086 million followed by Alberta and Quebec. Assets of the co-operatives came to \$1,503 million at year-end, a gain of 13 per cent for the period. Total membership amounted to approximately 1,870,000.

Business revenues of the wholesales rose in 1973 by 25 per cent to \$1,043 million, the first time the billion dollar mark has been passed. Data on the wholesales are presented separately from that of the locals since their sales figures are mostly a duplication of the locals' sales. Assets of the wholesales grew by 17 per cent in the year mostly in receivables and inventories occasioned by the rising level of business activity during the year.

Two important national co-operative bodies work together to improve co-operative organization, education and promotion. The Co-operative Union of Canada concentrates its efforts in English-speaking areas while the *Conseil canadien de la coopération* serves co-operatives in French-speaking areas.



Co-op Feed Services new mill at Truro, NS.

Incoming grains and other ingredients are elevated to the top of the mill and directed through spouts to the various storage bins.

After the feed is mixed, it is elevated and dropped by gravity to various bins for further processing, for bagging or for bulk shipment to the customer.



St. Francis Xavier University in Nova Scotia was the first institution of higher learning in Canada to become involved in the movement, beginning in the 1930s with a co-operative extension program of adult education. From that institution advantages of the co-operative philosophy were spread throughout the Maritime Provinces. They encouraged and assisted the people to better their economic circumstances through the establishment of co-operative enterprises. In the post-war era co-operative courses were introduced at the university itself. Other universities eventually followed this example and there are now about 20 colleges and universities across the country offering one or more co-operative courses to their students.

The Coady International Institute, established at St. Francis Xavier University in 1960, provides co-operative training and education to non-Canadian students from developing countries which have found the self-help nature of co-operative organization to be very appropriate. Co-operative College of Canada in Saskatoon, formerly Western Co-operative College, offers short courses for the personnel of co-operatives as well as training courses for foreign students. Courses are offered in residence or by extension. The *Institut coopératif Desjardins* in Quebec specializes in adult education and social leadership for co-operative members and foreign students.

The Consumer Price Index

The goods on which the Consumer Price Index (CPI) for Canada was based from 1961 to April 1973 relates to 1957 family expenditure patterns. Since April 1973, the CPI has been based on the 1967 family expenditure pattern, with the exception of the food component which pertains to 1969 spending habits.

The rate of change in the CPI for Canada as measured by the percentage difference between annual average indexes, accelerated between 1973 and 1974 when compared with the five previous year-to-year changes. Food prices, which had risen more than 16 per cent between 1972 and 1973, were responsible for approximately two fifths of the rise in the CPI between these two years. The major contributors to

**Table 1. The consumer price index and its major components for Canada
percentage change between annual average indexes**

	1969 1968	1970 1969	1971 1970	1972 1971	1973 1972	5-year average	1974 1973
All Items	4.5	3.3	2.9	4.8	7.6	4.6	10.9
Food.....	4.2	2.3	1.1	7.6	14.6	6.0	16.3
All items excluding							
Food	4.6	3.8	3.5	3.7	5.0	4.1	8.8
Housing	5.1	5.0	4.5	4.7	6.4	5.1	8.7
Clothing	2.8	1.8	1.5	2.6	5.0	2.7	9.6
Transportation	4.6	4.0	4.1	2.6	2.6	3.6	9.9
Health and personal care	4.9	4.4	2.1	4.8	4.8	4.2	8.7
Recreation, education and reading	5.9	3.5	3.4	2.8	4.2	4.0	8.7
Tobacco and alcohol	3.8	1.2	1.7	2.7	3.2	2.5	5.5



Tractor assembly bay at the Co-op Implement plant in Transcona, Man.

Table 2. Consumer price index and its major components for regional cities, percentage change, between 1973 and 1974

	All items	Food	Hous- ing	Cloth- ing	Trans- porta- tion	Health and personal care	Recreation, education and reading	Tobacco and alcohol
St. John's, Nfld.	12.8	19.7	10.4	10.0	12.3	12.4	7.9	4.3
Halifax, NS	9.6	15.9	8.1	4.7	9.4	6.9	6.7	5.0
Saint John, NB	10.2	14.4	9.6	4.4	11.9	9.8	6.9	5.1
Quebec, Que.	11.2	16.0	9.6	7.8	10.9	8.9	10.3	6.6
Montreal, Que.	11.1	17.3	7.5	10.1	10.0	8.5	8.8	7.1
Ottawa, Ont.	10.7	16.0	8.3	9.6	12.2	8.5	7.2	5.9
Toronto, Ont.	10.5	16.0	8.3	9.7	10.0	9.8	8.8	4.8
Thunder Bay, Ont.	10.7	15.5	8.3	10.0	12.4	7.1	7.4	5.2
Winnipeg, Man.	10.7	16.3	8.9	9.5	8.9	9.0	8.7	4.7
Saskatoon - Regina, Sask.	9.4	15.1	6.0	10.1	7.9	8.6	9.9	6.1
Edmonton - Calgary, Alta.	10.1	15.3	8.3	10.5	9.4	7.2	8.7	3.4
Vancouver, BC	11.6	18.8	9.9	10.5	6.7	9.5	9.0	6.7

this largest year-to-year food price increase since 1948, were food eaten away from home, fresh milk, bread, beef and sugar.

The consumer price index for regional cities measures the movement in prices faced by consumers within a specific city. Between 1973 and 1974, the CPI increased in all regional cities, ranging from 9.4 per cent in Saskatoon-Regina to 12.8 per cent in St. John's, Nfld.

Consumer price movements for Canada, when reclassified by goods and services, provide another perspective of the incidence of price change. From 1973 to 1974, the price index of goods increased 12.6 per cent compared to an average yearly increase of 4.1 per cent for the five preceding years. The services price index increased 7.9 per cent between these two years compared to a yearly average increase of 5.7 per cent in the five previous year-to-year periods.

The purchasing power of the Canadian consumer dollar declined from 66 cents in 1973 to 60 cents in 1974 relative to \$1.00 in 1961.

International Trade

Canada's exports and imports reached record levels of \$32,100 million and \$31,600 million in 1974, representing increases of 26.5 per cent and 35.5 per cent respectively over 1973. To a greater degree than in 1973, higher prices for many commodities important in Canada's international trade were largely responsible for these value increases, and obscured an actual drop in the volume of exports and a moderate growth in the volume of imports.

Foreign trade of Canada, 1969-74 (million dollars)

Year	Exports			Imports	Total trade	Balance of trade
	Domestic exports	Re-exports	Total exports			
1969	14,443	428	14,871	14,130	29,001	741
1970	16,401	419	16,820	13,952	30,772	2,868
1971	17,397	423	17,820	15,618	33,438	2,202
1972	19,661	479	20,140	18,669	38,809	1,471
1973	24,719	582	25,301	23,303	48,604	1,998
1974	31,293	760	32,052	31,579	63,631	474

Figures may not add, owing to rounding.

The trade surplus of close to \$500 million in 1974 was down sharply from that of \$2,000 million in the preceding year, as the rate of increase in Canada's imports accelerated sharply, while that of exports slowed down as a result of the energy crisis and the general economic slowdown. The 1974 surplus, which was the smallest since that of some \$250 million in 1966, compared with the record high surplus of nearly \$2,870 million in 1970.

Foreign trade by stage of fabrication, 1973 and 1974

Stage of fabrication	Exports		Imports	
	1973 %	1974 %	1973 %	1974 %
Crude materials	29.3	34.3	13.2	16.6
Fabricated materials	34.5	34.8	19.9	22.6
End products	36.2	30.9	66.9	60.8
Total	100.0	100.0	100.0	100.0





Lumber for export at New Westminster, BC.

Much higher prices for food, oil, other crude and many fabricated materials contributed to increasing the proportion of crude materials in both exports and imports and that of fabricated materials in imports. The share of end products, or finished goods, dropped sharply from 36 per cent in 1973 to 31 per cent for exports and from 67 per cent to 61 per cent in 1974 for imports.

Commodity exports, 1970-74 (million dollars)

Commodity	1970	1971	1972	1973	1974
Wheat	687	833	927	1,220	2,041
Animals and other edible products	1,181	1,279	1,428	1,933	1,783
Metal ores and concentrates	1,522	1,415	1,397	1,997	2,372
Crude petroleum	649	787	1,008	1,482	3,408
Natural gas	206	251	307	351	494
Other crude inedible materials	707	811	848	1,189	1,490
Lumber	664	830	1,174	1,598	1,289
Pulp	785	798	820	1,059	1,861
Newsprint	1,110	1,084	1,158	1,287	1,722
Fabricated metals	1,995	1,697	1,716	2,082	2,944
Other fabricated inedible materials	1,311	1,389	1,700	2,168	2,774
Motor vehicles and parts	3,499	4,171	4,718	5,338	5,579
Other machinery and equipment	1,665	1,659	2,014	2,454	2,809
Other domestic exports	418	393	445	561	726
Re-exports	419	423	479	582	760
Total exports	16,820	17,820	20,140	25,301	32,052

The trade surplus with the US almost vanished to \$13 million from surpluses of \$586 million in 1973 and \$1,085 million in 1972. There was a petroleum-related deterioration in trade balances with Latin America and with other countries. The deficit with the former area more than doubled from \$207 million to \$552 million; and the surplus of \$94 million in 1973 with the second group of countries changed to a deficit of \$749 million in 1974. In contrast, there were larger surpluses with the United Kingdom, increasing \$175 million to \$768 million and with the original European Economic Community, up \$118 million to \$261 million. The surplus with Japan of \$797 million was little changed from 1973.

Exports

The US continued to be Canada's best customer receiving \$21,263 million or 66 per cent of Canada's exports in 1974, which exceeded the previous year's total of \$17,070 million by 24.5 per cent.

At \$2,224 million, exports to Japan were 23 per cent higher, and those of \$1,895 million to the United Kingdom were 18.5 per cent greater than in 1973. The USSR which was in sixth place with purchases of \$292 million in 1973, took only \$30 million of Canadian goods in 1974, with the virtual completion of large contract deliveries of wheat and barley. The volume of wheat shipments to all markets also

Saint John, NB harbour.



declined by 18 per cent to 11,157,500 tons, but the total value jumped 67.5 per cent to \$2,041 million resulting from the doubling of the average price of wheat from \$2.69 to \$5.49 per bushel in 1974.

Rising prices also brought about a sharp increase of 130 per cent in the value of crude oil deliveries to the US from \$1,482 million in 1973 to \$3,408 million in 1974, despite a fall of more than 20 per cent in the volume of shipments. Exports of metal ores, wood pulp, newsprint and fabricated metals were all higher as were motor vehicles and machinery. Lumber shipments, however, declined as a result of depressed building activity in the US.

Exports by leading countries, 1970-74 (million dollars)

Country	1970	1971	1972	1973	1974
United States	10,900	12,025	13,963	17,070	21,263
Japan	813	831	965	1,811	2,224
United Kingdom	1,501	1,395	1,385	1,599	1,895
Federal Republic of Germany	388	322	319	447	542
Italy	187	211	204	298	463
People's Republic of China	142	204	264	288	435
Brazil	93	94	88	114	396
Netherlands	281	236	260	287	387
Belgium and Luxembourg	192	183	201	285	367
France	167	157	160	218	315
Australia	202	183	163	215	307
Norway	179	187	154	182	233
Venezuela	112	123	155	131	205
Mexico	96	80	100	120	192
Cuba	59	59	59	82	146
India	131	151	103	157	122
Spain	67	66	57	68	120
Switzerland	41	39	45	69	101
South Korea	19	25	33	66	72
USSR	102	128	285	292	30

Imports

At \$21,250 million, imports from the US in 1974 were 29 per cent higher than 1973, and accounted for 67.0 per cent and 70.5 per cent of total imports in the respective years. Japan with \$1,427 million stood second, representing 4.5 per cent of all imports. On account of rapidly advancing petroleum prices, Venezuela with \$1,289 million surpassed the United Kingdom in third rank as a source of imports. Imports from this country rose by 12 per cent to \$1,127 million.

Imports of machinery, automotive and other equipment, which increased 23 per cent to \$15,406 million in 1974, accounted for nearly half of Canada's imports. This proportion was, however, down from 54 per cent in 1973 because of sharper rises in

importation of other commodities. The value of crude oil imports, for example, almost tripled to \$2,646 million, and represented 8.5 per cent of the 1974 import bill. In contrast, the volume of petroleum imports declined 11 per cent to 291.2 million barrels. Above average increases were recorded in imports of fabricated metals and chemicals to \$1,862 million and \$1,537 million respectively.

Commodity imports, 1970-74 (million dollars)

Commodity	1970	1971	1972	1973	1974
Food	974	995	1,216	1,625	2,165
Animals and other edible products	141	162	185	356	349
Metal ores and concentrates	244	242	239	330	394
Crude petroleum	415	541	681	941	2,646
Other crude inedible materials	513	539	620	745	1,031
Fabricated textiles	426	501	588	659	817
Chemical products	712	711	830	1,023	1,537
Fabricated metals	663	742	819	1,026	1,862
Other fabricated materials	1,084	1,187	1,342	1,573	2,260
Motor vehicles and parts	3,252	4,110	4,934	6,063	6,995
Other machinery and equipment	3,992	4,237	5,183	6,474	8,411
Other imports	1,536	1,651	2,032	2,486	3,112
Total imports	13,952	15,618	18,669	23,303	31,579

Imports by leading countries, 1970-74 (million dollars)

Country	1970	1971	1972	1973	1974
United States	9,917	10,951	12,878	16,484	21,250
Japan	582	803	1,071	1,011	1,427
Venezuela	339	388	411	522	1,289
United Kingdom	738	837	949	1,005	1,127
Federal Republic of Germany	371	429	513	607	764
Iran	34	67	71	132	616
France	158	213	251	327	395
Australia	146	126	197	241	329
Italy	145	157	204	237	316
Sweden	106	114	141	166	234
Taiwan	52	81	126	164	194
Belgium and Luxembourg	52	59	90	104	173
Netherlands	79	76	92	118	162
Switzerland	81	86	102	118	137
Hong Kong	78	80	105	110	135
South Korea	15	19	44	91	134
South Africa	46	55	59	81	128
Mexico	47	50	53	83	114
Brazil	49	51	62	87	112
Nigeria	45	57	61	82	54

Balance of International Payments

The balance of international payments for a country can be defined as a systematic record of all the flows of real resources between a country and the rest of the world which at the same time measures changes in a country's foreign assets and liabilities.

International transactions in goods, services, transfers and capital have an important effect on the Canadian economy and the monetary system of the country. The balance of payments accounts form an integral part of the system of national accounts. Transactions in goods and services are an important constituent and determinant of the Gross National Product (GNP) while the capital account of the balance of payments forms a sector in the financial flow accounts.

Sources of balance of payments data are as varied as the range of transactions included in each of the accounts. Considerable information originates from annual, quarterly and monthly surveys carried out by the balance of payments division of Statistics Canada. Because of the deadlines associated with the quarterly reports, quarterly surveys are more restricted and less comprehensive than annual surveys. Other government departments, other divisions of Statistics Canada and the Bank of Canada all provide information concerned with transactions between residents of Canada and non-residents.

In 1974 Canada's current account deficit increased to \$1,877 million up almost \$1,500 million from \$425 million in 1973. Economic activity in Canada as measured by the growth in the GNP in constant dollars increased by 3.7 per cent in the year. On a seasonally adjusted basis there was strong growth in the first quarter which was followed by two quarters of no growth and a sharp drop in the fourth quarter. The seasonally adjusted current account balance followed a similar and contributory pattern going from a small deficit of \$141 million in the first quarter to a record deficit of \$1,087 million in the final quarter of the year.

The main factor in the increased deficit from the previous year was the fall of over \$1,200 million in the surplus on merchandise trade to \$1,020 million. With export prices rising faster than those for imports the deterioration in the trade balance was even larger in constant dollar terms. As in 1973, there were major labour disputes which severely disrupted the pattern of trade while the demand for exports was reduced by lower economic activity in many countries. Augmenting the drop in the merchandise trade surplus was a rise of almost \$250 million in the deficit on non-merchandise transactions to \$2,897 million.

Capital movements led to a net inflow in 1974 of \$1,901 million, a swing of about \$1,950 million from the small net outflow recorded in the previous year. Inflows of capital in long-term forms rose, on balance, by almost \$300 million to \$944 million. The main factors in the change were a rise of about \$1,100 million to \$2,437 million in new Canadian issues sold abroad and a drop of almost \$200 million in the outflow for the retirement of Canadian securities. Movements having a reverse effect were a \$400 million rise in net disbursements of export credits, a \$300 million drop in foreign direct investment in Canada, and increased outflows of about \$100 million each for government loans abroad and the net repurchase of outstanding Canadian equities.

Short-term capital movements in 1974 resulted in a net capital inflow of \$957

Canadian balance of international payments, 1972-74^P
(million dollars)

Item	Between Canada and all countries			Between Canada and US		
	1972	1973	1974	1972	1973	1974
Current account						
Current receipts:						
Merchandise exports ¹	20,222	25,500	32,493	14,025	17,253	21,590
Service receipts:						
Travel	1,230	1,446	1,684	1,023	1,160	1,321
Interest and dividends	627	653	784	361	406	462
Freight and shipping	1,220	1,421	1,602	704	799	882
Other service receipts	1,309	1,471	1,689	700	750	836
Transfer receipts ²	906	1,039	1,363	297	256	297
Total current receipts	25,514	31,530	39,615	17,110	20,624	25,388
Current payments:						
Merchandise imports	18,577	23,269	31,473	12,792	16,439	21,065
Service payments:						
Travel	1,464	1,742	1,986	919	1,073	1,198
Interest and dividends	1,701	1,997	2,276	1,417	1,653	1,885
Freight and shipping	1,346	1,591	1,783	726	860	945
Other service payments	2,178	2,355	2,786	1,562	1,704	1,945
Withholding tax	287	322	433	..	..	..
Transfer payments	616	679	755	148	152	162
Total current payments	26,169	31,955	41,492	17,564	21,881	27,200
Total current account balance	-655	-425	-1,877	-454	-1,257	-1,812
Capital account						
Direct investment:						
In Canada	+715	+720	+435	+569	+485	+416
Abroad	-385	-590	-645	-138	-366	-363
Portfolio transactions:						
Canadian securities:						
Outstanding bonds	+293	+31	+39	-4	-27	+15
Outstanding stocks	-62	-24	-111	-146	+20	-68
New issues	+1,756	+1,353	+2,437	+1,056	+990	+1,839
Retirements	-551	-663	-485	-415	-382	-414
Foreign securities:						
Outstanding issues	+304	+93	+39	+273	+73	+32
New issues	-58	-56	-26	-12	-4	-2
Retirements	+14	+15	+12	+7	+8	+8
Other long-term capital transactions	+1,498	+439	+193	-6	-6	-45
Net long-term capital transactions	+1,762	+659	+944	+1,274	+973	+1,619
Net short-term capital transactions	-888	-701	+957	-1,305	-770	+1,149
Total net capital balance	+874	-42	+1,901	-31	+203	+2,768
Balance settled by exchange transfers	-	-	-	+776	+625	..
Allocation of Special Drawing Rights	+117	-	-	-	-	-
Net official monetary movements	+336	-467	+24	+291	-429	..

¹Including non-monetary gold.²Including withholding tax.^PPreliminary.

.. Not available.

- Nil or zero.



Mirabel, Canada's new international airport, near Montreal, Que., with runway 24 in foreground.

million, a swing of some \$1,650 million from the net outflow recorded in 1973. The main factors contributing to this change were a swing of almost \$1,800 million to a net inflow of \$1,565 million from the reduction in non-bank holdings of foreign currencies abroad, an increase of about \$450 million in Canadian dollar deposits of non-residents and a decline of \$350 million in the net outflow from the category "other short-term capital transactions." A major reverse flow was the \$1,000 million higher outflow to increase the chartered banks' net foreign currency position with non-residents reflecting in part the lifting in January of restrictions on Canadian banking activities abroad following the elimination of similar controls in the US.

The current account deficit of \$1,877 million together with the capital account inflow of \$1,901 million led to a net increase in Canada's net official monetary assets of \$24 million. The value of the Canadian dollar in relation to the US dollar changed little in 1974, remaining just above nominal parity throughout most of the year.

Both long- and short-term interest rates rose to extremely high levels. In Canada

rates were generally above those abroad so that Canadian borrowers found it profitable to finance a significant proportion of their needs in foreign capital markets. Toward the end of the year short-term rates started to fall, especially in the US, as the authorities attempted to combat recessionary influences.

Preliminary estimates produced on the basis of available data indicate that Canada's balance of international indebtedness reached a book value of more than \$37,000 million by the end of 1974. Long-term foreign investment at \$59,000 million had increased by about \$5,000 million reflecting both an inflow of long-term capital and an increase in earnings accruing to non-residents. Other long-term liabilities, including non-resident equity in Canada's assets abroad, brought the total of long-term liabilities to over \$62,500 million. Various short-term claims on Canadians increased the total of Canada's external liabilities to over \$70,000 million. Canadian long-term investment abroad increased by some \$2,000 million to about \$17,000 million at the end of 1974. The major elements in this increase were outflows of long-term direct investment capital, re-invested earnings accruing to Canadians from their investments abroad, export credits, and loans and subscriptions of the Government of Canada to foreign countries and international investment agencies. Short-term claims on non-residents including resident holdings of foreign currencies and net official monetary assets brought the total of Canada's external assets to over \$33,000 million.

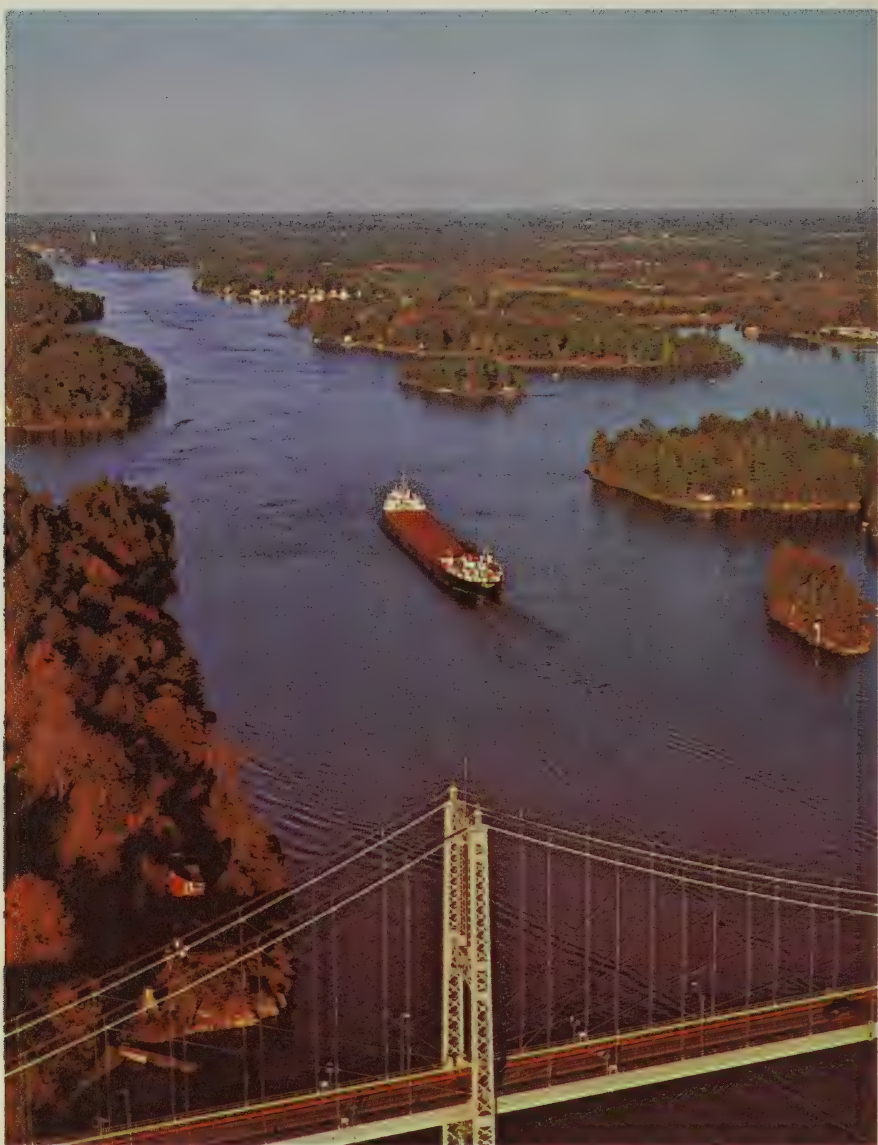
With the US the deficit on current account rose by \$555 million to \$1,812 million in 1974. Both merchandise and non-merchandise transactions contributed to this movement. The surplus on merchandise trade, which amounted to \$814 million in 1973 declined to \$525 million in 1974, whereas the deficit on non-merchandise trade registered a further \$266 million increase to \$2,337 million.

Merchandise exports to the US rose by 25 per cent to \$21,590 million. Shipments of crude petroleum which increased by more than \$2,000 million, accounted for almost half of the rise in exports. Merchandise imports from the US advanced by 28 per cent to \$21,065 million. More than half of this expansion came from increased purchases of end products. Automotive imports registered the largest gains, rising by more than \$700 million. The deficit on automotive trade with the US amounted to \$856 million in 1974, an increase of more than \$500 million from a year earlier.

Capital account transactions with the US led to a net inflow of \$2,768 million in 1974. There were net inflows of \$1,619 million and \$1,149 million for capital movements in long-term and short-term forms, respectively. Direct investment from the US at \$416 million was equivalent to more than 95 per cent of the annual net inflow from all countries.

Direct investment in the US by Canadian based enterprises led to a net outflow of \$363 million, a slight decrease from the net outflow of \$366 million during 1973. More than two thirds of this total occurred in the third quarter with the acquisition of a controlling interest in the ESB Company in the US, incorporated by The International Nickel Company of Canada Limited.

Sales to US residents of new Canadian issues reached a new high in 1974 of \$1,839 million, almost three quarters of total sales to all non-residents. Retirements of Canadian securities increased to \$414 million, while trade in outstanding foreign securities led to a net inflow of \$32 million, the lowest net inflow of the past six years, as Canadians continued to reduce their holdings of US equities.



Waterway traffic through the scenic Thousand Islands.

Among capital movements in short-term forms transactions of the Canadian chartered banks in foreign currency assets and liabilities with American residents resulted in a net inflow of \$1,073 million, a dramatic swing from the net outflow of \$263 million in 1973. A reduction in non-bank holdings of foreign currencies led to a net inflow from the US of \$176 million.

Transportation

Throughout Canadian history, transportation has been basic to the economic and social development of the country. Settlement followed first the navigable waterways, then the railways. Today, industry gravitates toward the highways. Passengers once travelled to this land by ship and overland by rail — now they depend to an increasing extent on aircraft and bus transport, or the private automobile. Recent developments are best seen in the context of the several modes of transport — air, rail, road and water.

Air Transport

From small beginnings in the 1920s the contribution of the aircraft to transportation in Canada has increased sharply. Most dramatic was the change that followed delivery of the first pure jet in 1960. This new type of aircraft, larger and capable of much greater speed and range, opened a new era not only for the passenger but for cargo as well. In 1958, 4.5 million passengers travelled on Canadian commercial air carriers; in 1974, 19 million went by air. For the year 1958 air cargo accounted for some 29 million goods-ton miles. The 1974 equivalent approached 600 million.

In Canada, commercial air services are licensed and regulated by the Canadian Transport Commission. Registration and inspection of aircraft, licensing of personnel, operation of a wide variety of airports, and the provision of air traffic control and other air navigation facilities are only some of the services provided to civil aviation by the Canadian Air Transportation Administration of the Ministry of Transport (MOT).

Although Canadian air carriers perform many varied services — including such specialty flying as crop dusting, forest fire patrol, pipeline inspection, aerial survey and photography, construction, and flight training — passenger and cargo transport is by far the most important activity. In 1974 some 584 air carriers licensed to operate in Canada transported an estimated 15 million passengers domestically and about 4 million on international routes. The international scheduled routes of four

Distribution of itinerant movement¹ at MOT tower-controlled airports by type of power plant, 1971-74

	1971		1972		1973 ^f		1974	
	No.	%	No.	%	No.	%	No.	%
Piston	1,198,464	59.9	1,351,175	60.5	1,584,255	61.2	1,465,022	57.7
Turbo-prop	247,205	12.4	234,818	10.5	235,825	9.1	234,495	9.2
Jet	481,982	24.1	547,885	24.5	661,967	25.6	734,675	28.9
Helicopters	69,988	3.5	92,042	4.1	99,720	3.9	100,837	4.0
Gliders	2,299	0.1	8,834	0.4	4,858	0.2	4,512	0.2
Total	1,999,938	100.0	2,234,754	100.0	2,586,625	100.0	2,539,541	100.0

¹A landing or take-off of an aircraft that is arriving from one airport or departing to another.

^fRevised.

Canadian air carriers—Air Canada, CP Air, Pacific Western Airlines, and Nordair—form a vast network connecting Canada to the US, the Caribbean, Western and Central Europe, the Middle East, the Soviet Union, Central and South America, the South Pacific and the Far East. In addition, Canadian airlines fly charters to destinations around the world.

Growth in civil aviation can be measured in the number of registrations for both aircraft and aviation personnel. From March 31, 1965, to December, 1974 the number of civil aircraft in Canada more than doubled from 7,016 to 16,149. Licences in force, for pilots of all types of aircraft, flight navigators, air traffic controllers, and for flight and maintenance engineers, totalled 51,034 on December 31, 1974.

Another indication of Canadian aviation activity is the number of aircraft movements recorded at airports with Ministry of Transport air traffic control towers. In 1974 the 57 major airports handled 5,692,711 landings and take-offs. This represents an increase of 438,741 movements or 8.4 per cent over 1973 when 56 towers reported 5,253,970 movements. The total for 1974 was 30.1 per cent higher than that for 1970. The upward trend in tower-controlled air traffic is primarily attributable to the 18.2 per cent rise in local movements, from 2,667,345 in 1973 to 3,153,170 for the year 1974. Indeed, itinerant movements showed a slight decline of 1.8 per cent from 2,586,625 in 1973 to 2,539,541 in 1974.

Twin Otter being loaded at Resolute Bay, NWT.





Air traffic control at Toronto's international airport.

**Scheduled air passenger origin and destination journeys, top 10 city pairs,
1968-73, (thousands of passengers)**

City pair	1968	1969	1970	1971	1972	1973
Montreal, Que. - Toronto, Ont.	547.3	586.1	674.8	685.8	758.6	915.6
Ottawa, Ont. - Toronto, Ont.	227.7	251.5	305.6	326.6	347.6	432.5
Calgary, Alta. - Edmonton, Alta.	173.2	212.9	234.8	254.8	275.3	332.2
Toronto, Ont. - Vancouver, BC	117.1	143.0	163.0	182.8	206.0	271.4
Calgary, Alta. - Vancouver, BC	111.2	141.9	166.0	179.4	201.9	247.6
Edmonton, Alta. - Vancouver, BC	102.0	122.0	139.3	144.7	170.1	217.3
Toronto, Ont. - Winnipeg, Man.	125.8	146.3	170.9	163.1	179.2	210.5
Halifax, NS - Toronto, Ont.	70.8	84.2	98.7	103.1	113.5	147.3
Calgary, Alta. - Toronto, Ont.	64.7	75.7	83.0	86.7	104.3	128.7
Vancouver, BC - Winnipeg, Man.	62.8	81.8	90.3	85.1	95.4	120.7

**Operations, operating revenue and expenses, and fuel consumption
Canadian commercial aviation, 1973 and 1974¹ (thousands)**

All services

	Transcontinental and regional air carriers ²		All other air carriers		Total all air carriers	
	1973 [†]	1974	1973 [†]	1974	1973 [†]	1974
Operations						
Passengers	15,300	17,100	2,100	1,900	17,400	19,000
Passenger-miles	14,948,200	16,741,500	1,133,500	1,148,300	16,081,700	17,889,800
Goods ton-miles	454,600	483,100	24,500	17,800	479,100	500,900
Flight departures	370	388	608	598	978	986
Hours flown	535	565	1,531	1,613	2,066	2,178
Operating revenues and expenses						
Total operating revenues (\$)	1,038,600	1,311,400	215,000	210,700	1,253,600	1,522,100
Total operating expenses (\$)	968,200	1,247,500	204,600	194,700	1,172,800	1,442,200
Fuel consumption						
Turbo fuel (gallons) ...	588,800	653,600	34,600	39,600	623,400	693,200
Gasoline (gallons)	1,300	900	16,600	17,200	17,900	18,100

¹Estimated.

²Air Canada, CP Air, Pacific Western Airlines, Transair, Nordair, Quebecair and Eastern Provincial Airways.

[†]Revised.

Recent growth of Canadian commercial aviation is reflected in selected comparisons. In 1973, Canadian air carriers transported 17.4 million passengers—in 1974 they carried an estimated 19 million, an increase of 9.5 per cent. Operating revenues earned by all air carriers in 1973 amounted to \$1,250 million, while those for 1974 approached \$1,500 million. Expenditures, reported at \$1,170 million in 1973, were estimated at over \$1,400 million for 1974.

Trends in domestic travel are dramatically illustrated in terms of scheduled air passenger origin and destination data. Figures for air journey origins and destinations of passengers between Montreal and Toronto showed an increase of 67.3 per cent from 547,300 in 1968 to 915,600 in 1973. Ottawa-Toronto passenger totals grew by 89.9 per cent from 227,700 in 1968 to 432,500 in 1973.

Showing parallel growth patterns, Canada's three largest airports, Montreal, Toronto and Vancouver, emplaned and deplaned a total of 19,620,400 passengers in 1973, up 36.1 per cent from the 14,411,200 passengers recorded in 1971. Similarly, these airports registered a combined increase of 20.8 per cent in the pounds of mail and cargo handled in 1973 over 1971, or 763.2 million pounds compared with 631.6 million pounds.



Container train crossing a trestle bridge over the Salmon River in New Brunswick.

Railways

Railways are the backbone of the Canadian transportation system. Two continent-wide railways span 4,000 miles from the Atlantic through vast stretches of rock, over barren muskeg, prairie lands and rugged mountain ranges to the Pacific Ocean. In 1850 there were 66 miles of railway in all the British North American colonies. A hundred years later Canada alone had 57,997 miles of track in operation. By 1973, 60,246 miles of track were in use.

Historically, railways have played a focal role in the political integration, settlement and economic development of Canada. Today, they are partners in multi-modal transportation systems designed to move specific products and containers over vast distances with speed, efficiency and economy. Innovations such as welded track, concrete ties, powerful locomotives, unit trains and comfortable high-speed passenger trains ensure for railways an important part in intercity transportation in the future.



Railway yards in Toronto, Ont.

Canadian National and Canadian Pacific continue to dominate the rail transport industry in Canada with their mainline transcontinental routes, feeder-service networks, and outside interests in the airline, trucking, coastal and oceanic shipping, hotel and communication fields. The Canadian National Railways are federally operated. Through the Canadian National the federal government also has an interest in other railway lines and marine services. Provincially operated lines include the Ontario Northland, the British Columbia Railway and the British Columbia Hydro's railway. The Government of Ontario has also been active in providing commuter service since May 23, 1967, when it set up the "GO" Transit to meet the needs of passengers commuting to and from Toronto.

The development of containerized shipments, requiring the co-operation of several modes of transportation and the design of smooth efficient interchange facilities, has been one of the most significant for rail freight in recent years. In 1969, 27,718 railway freight cars carried 517,292 tons of containerized freight. By 1974 this mode of transport had grown so rapidly that the amount of containerized freight carried had increased more than eightfold to 4,481,320 tons on 191,795 cars. In other words, while fewer than one in every hundred cars in 1969 carried containers, this traffic accounted for 4.6 per cent of all cars loaded in 1974. Revenue freight carried in 1973 increased to 265,945,725 unduplicated tons from the 1972 total of 237,909,761 tons, while the number of passengers carried decreased from 23,011,726 to 19,821,933. The number of employees needed to transport these people and goods decreased during this period from 130,814 to 124,201 persons.

The average length of haul of revenue freight in Canada or the average distance each ton was carried was 492 miles in 1973, a decrease from 521 miles a year earlier. The largest contributors to Canada's 1973 total railway revenue of \$2,123 million were Canadian National (52.7 per cent) and Canadian Pacific (36.4 per cent).

Road Transportation

Road transport accounts for the largest expenditure by governments on any mode of transportation in Canada. As recently as the 1972-73 fiscal year, combined expenditure by federal, provincial and local governments exceeded \$2,696 million for construction and maintenance of Canada's roads and streets. This expenditure for new and better roads and streets has been in response to the sharp increase in transportation requirements in recent years. During the decade from 1963 to 1973, passenger automobile registrations increased 64 per cent to 7,866,084; truck and road tractor registration rose 60 per cent to 1,799,042; bus registrations went up 96 per cent to 44,265, and motorcycle registrations leaped 674 per cent to 287,820 from 37,186. With the increased registration of vehicles during the decade 1963 to 1973 annual sales of gasoline rose 82 per cent to 6,409 million gallons; diesel fuel sales increased 344 per cent to 858 million gallons. A shortage of these fuels could have a crippling effect on this mode of transportation.

Motor vehicle registrations in Canada, 1963 and 1973

Motor vehicle registrations	Number of registrations		Increase %
	1963	1973	
Automobiles	4,788,896	7,866,084	64.3
Trucks	1,121,624	1,799,042	60.4
Buses	22,592	44,265	95.9
Motorcycles	37,186	287,820	674.0

Paralleling growth in registrations, the number of accidents has also increased. Motor vehicle accidents in Canada accounted for 6,706 fatalities in 1973, a rise of 8 per cent from 1972. Number of injuries rose 4 per cent to 223,777. The 6,706 fatalities occurred in 5,479 separate accidents.

Fatalities in motor vehicle accidents, by type of victim, 1972 and 1973

Fatalities	Number of fatalities	
	1972	1973
Drivers	2,508	2,536
Passengers	1,799	2,040
Pedestrians	1,203	1,304
Bicyclists	179	187
Motorcyclists (drivers and passengers)	314	415
Others	218	224
Total	6,221	6,706



Highway interchange near Ottawa, Ont. Road transport accounts for the largest expenditure by governments on any mode of transportation in Canada.

Net fuel sales, Canada, 1963 and 1973

Fuel	Number of gallons		Increase %
	1963	1973	
Gasoline	3,519,492,542	6,409,488,383	82.1
Diesel fuel	193,180,457	858,126,954	344.2

Water Transport

Shipping is the oldest mode of transportation in Canada but the technology of the 20th century is rapidly changing the face of the industry. The greater cargo-carrying capacity of today's ships, supported by a variety of highly-specialized equipment and innovative cargo-handling methods, permits an increase in trade tonnage every



Logs transported by truck in New Brunswick (above) and in British Columbia (below).



year. On the other hand, the trend toward use of larger ships in international trade has meant a slight decrease in the number of international arrivals and departures to 46,713 in 1973, compared with 49,738 for 1972. In 1974, Canada had 29,539 ships on register, up from the previous year's 28,053.

Close to 200 million tons of international cargo were handled at Canadian ports in 1973, an increase of more than 40 per cent over five years. A total of 87.8 million tons, or 44.3 per cent of Canada's international trade, were shipped from the eight major ports of Halifax, NS; Saint John, NB; Quebec, and Montreal, Que.; Toronto, Hamilton and Thunder Bay, Ont.; and Vancouver, BC.

Of Canada's ports, Vancouver ranked first in total tonnage handled, having loaded and unloaded 39.1 million tons. The twin port of Sept Îles—Pointe Noire ranked second in 1973, handling 29.05 million tons, largely iron ore. Montreal dropped to third position, with 21.7 million tons handled.

Canada's exports by water to the US included iron ore, crude oil, fuel oil, lumber and timber. Meat and iron ore were shipped eastward to the United Kingdom, the Netherlands and Italy, and westward to Japan and China. Meat and barley were the main products exported to the USSR. Canada's imports by water included bituminous coal, iron ore and concentrates, and limestone from the US; crude petroleum from Venezuela, Iran, Saudi Arabia and Angola; and alumina and bauxite ores from Jamaica, Trinidad and Tobago. In 1973, Great Lakes shipping accounted for some 63 per cent of the shipping trade between Canada and the US.

The St. Lawrence Seaway has generated an increased volume of traffic in the Great Lakes by extending the season and allowing larger ocean-going vessels to travel far inland. The Seaway permits passage of vessels having a maximum draught of 26 feet. There were 9,431 transits up and down the Seaway in 1974 by ships carrying 96.4 million tons of cargo, mainly bulk commodities. In 1974, the

Travelling toward Tuktoyaktuk, NWT, a tug with six barges, loaded with equipment for Arctic exploration, navigates the Mackenzie River.





Rail tank cars transport liquid sulphur to North American customers from a plant near Calgary, Alta.

Seaway opened on March 26 and closed on December 17. With the extension of Great Lakes navigation to year-round operations during the winter of 1974-75, iron ore tonnage for the season totalled just over 90 million gross tons, slightly below the previous season's record of 94.3 million tons. In 1973 iron ore tonnage broke the 90-million-ton mark for the first time in 20 years.

Containerization as a method of shipping cargo by water continued to grow. Containerized cargo inbound during 1973 totalled 2,418,322 tons, or 22 per cent above the 1972 level, while the outbound equivalent rose to 3,204,983 tons, or 57 per cent above the 1972 figure.

Technology

Technology has long been used to overcome the special transportation problems posed by Canada's geography and climate. Great distances, land barriers and soil conditions, including permafrost, have required special engineering methods to provide an efficient transportation system. More recently, social demand has ensured that transportation technology also takes account of the environment and various social costs in its development.

Government, industry and educational institutions are all involved in the effort to bring improvements to all forms of transport. Besides the National Research

Council which conducts detailed, sophisticated studies on most phases of the transport industry, several Canadian universities now have centres for transportation research. Queen's, York, Toronto, Manitoba and British Columbia Universities focus both on the broad and long-range problems of transport and on specific technical solutions.

A number of ideas recently developed through research have proved applicable to railways. These include: a communications system in long trains to replace radio communications, which are not completely satisfactory in tunnels, winding terrain, and in proximity to other trains; guided radar for detection of snow and landslides around curves or over hills, using an electromagnetic surface waveguide such as coaxial cable; and control of multi-locomotive powered trains to reduce the incidence of coupler failure due to high drawbar pull in long trains. Three types of experimental passenger trains—the LRC (light, rapid and comfortable) which uses present technology, the turbine-driven train, and a more futuristic model based on magnetic levitation principles—could provide ground transportation capable of linking city centres at speeds competitive with air travel.

A pioneer in the development of short take-off and landing (STOL) aircraft, Canada has added a further dimension to the use of such aircraft. In July, 1974 Airtransit introduced city-centre to city-centre commuter service between Rockcliffe Airport in Ottawa and the Montreal STOL port, using the 11-passenger de Havilland Twin Otter (DHC-6). A larger and much quicker STOL aircraft requiring only 2,000 feet of runway, capable of transporting 48 passengers at a cruise speed of about 275 miles per hour, has been developed by the de Havilland Aircraft Co. This aircraft, the Dash 7, a four-engine turbo-prop, made its first flight on March 27, 1975, after which it underwent testing for the Ministry of Transport to obtain flight certification.

The Dash 7, a short take-off and landing aircraft is capable of transporting 48 passengers at a cruise speed of about 275 m.p.h. and requires only 2,000 feet of runway.





Snowmobiling in the foothills of Alberta.

Camping near Springdale, Nfld.





Communications

The existence of Canada as a political and social entity has always been heavily dependent upon effective systems of east-west communications. This is the historical reason for development of the routes of the voyageurs, coast-to-coast railways, telegraph and telephone systems, broadcasting services, airlines, microwave networks, the Trans-Canada Highway and a domestic satellite communications system. These systems, counter-balancing the strong north-south pull of continentalism, have been essential for the economic development of Canada, for transmitting and disseminating information and for expression and sharing of social and cultural values.

Telecommunications make possible virtually instantaneous transfer of information in any form between all parts of the country. They help bridge distance—an obstacle to national trade and commerce—and provide prospects for reducing regional disparities and developing the Canadian north.

Television, radio, telephone, telegraph, teletype, facsimile and other means of communications have become part of our daily life. By the end of 1973, the number of telephones in service in Canada reached 11,677,444 (about one phone for every two people). Ninety-six per cent of households now have television sets. Cable television, a medium that may provide a variety of services in the future, including two-way communications, is now wired into more than 2.6 million Canadian households (about 39 per cent), carrying TV and FM radio signals. Radio operating licences in force in Canada at the end of the fiscal year 1974-75 numbered nearly 400,000.

The Canadian System

In most countries outside North America, telecommunications services are provided by the state. In Canada, these services are provided by a mixture of investor-owned companies and government agencies. The industry comprises not only telephone and telegraph companies, broadcasters and cable operators, but also manufacturers of telecommunications equipment. Operations of telecommunications carriers are generally licensed and regulated by either federal or provincial authorities.

There were about 985 telephone common carriers by the end of 1973, ranging from big corporations serving millions of telephones to small co-operatives, mainly in Saskatchewan, some of which serve as few as 25 customers. However, the eight member companies of the Trans-Canada Telephone System (TCTS) account for more than 90 per cent of total subscribers. Much of the long distance communications in Canada travel by their two nation-wide microwave routes.

Other telecommunications services are provided by a variety of carriers. CNCP Telecommunications, specializing in business communications, offers services such as telegraph and telex. Telesat Canada, jointly owned by the Canadian government and the common carriers, operates the domestic satellite communications system. The Canadian Overseas Telecommunications Corporation, a Crown corporation, provides Canada with telecommunications to the rest of the world through cables and international telecommunications satellites.

Federal and Provincial Authority

The division of legislative authority between the Parliament of Canada and the provincial legislatures is established by the British North America Act. The only form of telecommunications known to the Fathers of Confederation in 1867 was the electric telegraph, then still in its infancy, and accordingly the application of the Constitution to other modes of telecommunications has developed from a series of judicial decisions, each of the greatest importance although they are neither comprehensive nor in all respects conclusive.

Radiocommunications, including broadcasting, transmitting and receiving undertakings, are federally regulated. Telecommunications carriers under federal jurisdiction include Bell Canada, British Columbia Telephone Company, CNCP Telecommunications, Telesat Canada, the Canadian Overseas Telecommunication

The Department of Communications Research Centre and the RCMP are working on a project to develop a standardized mobile digital data terminal to connect cruisers directly with the RCMP's Canadian Police Information Centre computer in Ottawa.





Radio station and weather office of the permanent camp at Eureka, Ellesmere Island, NWT.

Corporation and four relatively small telephone or telegraph companies. All other telecommunications common carriers, numbering about 985, are provincially regulated.

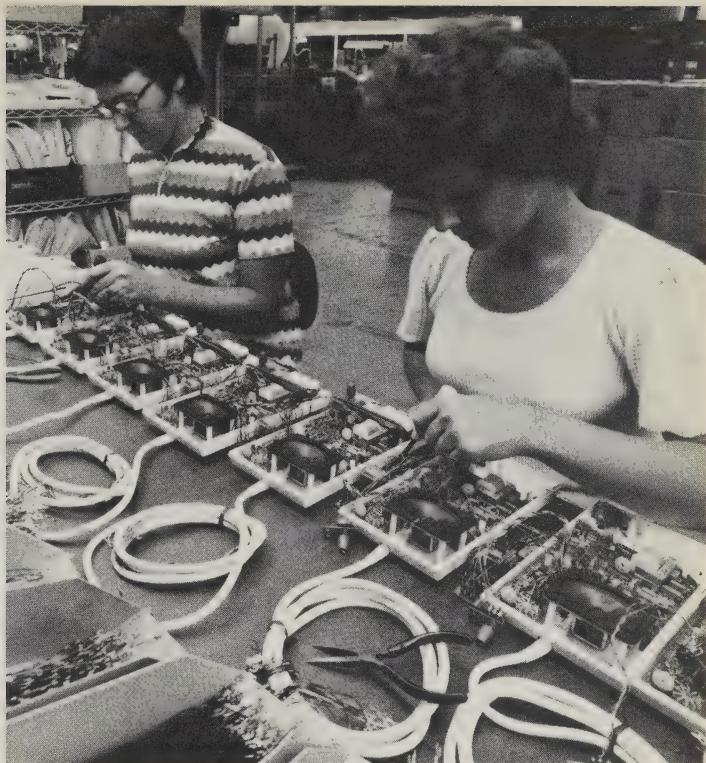
The federal Department of Communications is responsible, both nationally and internationally, for the development and efficiency of communications in Canada and for the long-range planning of Canada's communications. It carries out research in the field of telecommunications and manages the radio-frequency spectrum in Canada. This latter function requires development of regulations, technical standards, radio-frequency plans and assignment criteria. It includes technical evaluation of applications to use radio frequencies, licensing radio stations, and technical certification of broadcasting undertakings; inspection and monitoring of radio stations to ensure adherence to regulations and standards; and gathering information for spectrum planning purposes.

The objectives of federal communications policy were reiterated in April 1975 in a position paper tabled in the House of Commons by the Minister of Communications. The paper, *Communications: Some Federal Proposals*, lists four main objectives.

First, communications systems and services should be reliable, efficient and economical in all parts of the country, taking full account of regional and provincial needs and priorities. Second, communications systems and services should be designed to preserve and strengthen the economic, social, cultural and political fabric of Canada. Third, communications systems and services in Canada should be Canadian-owned or regulated or both. At the same time, there should be a

Computerized handling of long distance telephone calls by operators in Vancouver, BC.





By the end of 1973, the number of telephones in service in Canada reached 11,677,444 (about one phone for every two people).

strengthening of Canadian industry, both in research and manufacture of telecommunications equipment and in the provision of computer/communications services and facilities. Fourth, Canadians should have access to as wide a choice of information and entertainment as possible, in both official languages, and support for Canadian sources of creativity and information should be emphasized.

Events in 1974-75

The policy paper tabled in April 1975 outlined the basis for new federal communications legislation that would see the complete revision of existing statutes. It also outlined ways by which the federal government could move toward closer and more effective collaboration with the provincial governments.

The Canadian Radio-Television Commission and the telecommunications committee of the Canadian Transport Commission were integrated under legislation passed by Parliament in May 1975. It was the first of a two-phase plan to update Canadian communications legislation. The new commission known as the Canadian Radio-Television and Telecommunications Commission, has the same initials as the old CRTC.

Federal communications research was carried forward on a number of fronts in 1974-75. The Department of Communications signed agreements with Alberta, Nova Scotia and Newfoundland related to educational technology. Contracts totalling \$585,845 were awarded to 21 Canadian universities for 44 research projects in fields of communications.

A score of groups ranging from provincial governments to native peoples' associations are actively helping to shape the satellite communications services of tomorrow by participating in a unique program of social and technical experiments to use the department's Communications Technology Satellite (CTS). The aim of the CTS experiment is to test the technology and applications of a new breed of high-powered orbiting transmitters to meet the needs of the 1980s. About 80 per cent of the \$63 million cost of the world's most powerful communications satellite, scheduled for launching in December 1975, is going to Canadian industry.

Teleconference experiments were carried out in November 1974 and April 1975. These live, two-way television hook-ups via satellite permitted groups of doctors in Montreal and Paris to discuss medical issues. The Franco-German *Symphonie* Corporation and earth station facilities of the Canadian Overseas Telecommunications Corporation (COTC) were used for the video conferences.

In January 1975 two policies developed jointly by the Departments of Communications and Finance were made public. One stated the conditions under which chartered banks and federally regulated telecommunications carriers could participate in public data processing. The second gave federal support for a common user communications network for an electronic payments systems. The network would be shared by banks, retailers and government and would be accessible to users on a fee-for-use basis.

CNCP Telecommunications' telex network was connected to the TWX network in the US in 1974. Telepost, a service offered by CNCP and the Canada Post Office to telex subscribers, was extended into the US when it was linked with the US Mailgram network. The Infodat network, a digital service provided by CNCP, expanded to include 25 servicing locations compared to 11 when it was first introduced in 1973. CNCP announced plans in March 1975 to introduce, by the second half of 1976, a nation-wide digital, data switching network called Info-Switch, offering both circuit and packet switching.

Canada's third domestic telecommunications satellite, Anik III, was launched in May 1975, making Telesat Canada one of the world's leading satellite communications organizations. About 22,000 miles high in space, each satellite has facilities for relaying 10 colour television channels or up to 9,600 simultaneous telephone circuits. All Canada is within their range, distance and isolation are removed as obstacles to communications and the opportunities for almost unlimited usage are presented to government, business, industry, science and technology.

In September 1974, the Canadian Overseas Telecommunication Corporation's (COTC) third international gateway, or earth station terminal, complementing those in Montreal and Vancouver, was officially opened, providing 71 direct telephone circuits for four European countries. A new telex switching centre with an ultimate capacity of 2,000 circuits is being installed in Montreal for service in the first quarter of 1976. In conjunction with its 25th anniversary, the COTC hosted the third



CN complex and telecommunications tower in Moncton, NB.

meeting of the International Telecommunication Satellite Organization (INTELSAT) signatories in April 1975 in Montreal. The COTC is the Canadian signatory to INTELSAT and operates earth stations at Mill Village, NS, and Lake Cowichan, BC.

In June 1975, the Trans-Canada Telephone System (TCTS) announced that Direct Dialing Overseas will be put into service in Vancouver by late 1976. It will be the first Canadian city to have this service and the work for this service is being performed by the British Columbia Telephone Company.

The first leg of Double DUV (Data-Under-Voice) was put into operation in June 1975. Double DUV is an improved method of sending data communications over the

existing microwave network. The idea is based on a new transmission technique which transmits digital data in a portion of the microwave radio spectrum below the frequencies normally used for voice telecommunications.

Also in June 1975 the TCTS started transmitting radio broadcasts over the world's longest stereo network, from St. John's to Vancouver. The Canadian Broadcasting Corporation will be providing FM stereo programs to a network of cities across Canada.

Plans were unveiled in October 1974 for Datapac, a universally available, packet switched, shared data network. The Datapac will provide the first commercial use in Canada of packet switching, by which information is put into standard size packets for transmission.

The TCTS introduced two buffered terminals for computer communications in 1974. The terminals, called Datacom 500 and Datacom 600, are keyboard teleprinter units with built-in storage capacity for retaining information.

The Challenge Today and in the Future

In recent years, technological developments have been adding a new complexity to telecommunications. Multi-channel coaxial cable systems may eventually offer the public a vast new range of information and entertainment in the home from computerized databanks and libraries. Within the near future, direct home reception of satellite broadcasting may become feasible. Rapid development of simple low-cost video, film-making, and broadcasting equipment offers increasing opportunity for members of the public to take an active part in the communications process. Other notable developments in communications systems include digital technology, the introduction of packet switching and optical fibre distribution systems, which will greatly expand the capacity of today's technology. Although there have been and continue to be notable advances in communications technology, the full potential for markets has not yet been exploited. The impact of the new technology has mainly been felt in its business and industrial applications. As costs come down, however, more and more people will be directly affected.

There is an evident and growing tendency for many formerly distinct systems of electronic communications to become interrelated. One very important symptom of this development is the growing interaction of broadcasting with other forms of telecommunications. Another is the rapid integration of the technology of computers and communications, the economic benefits of which are already being vigorously exploited. The government is determined that the future communications environment foreshadowed by the technology should not be allowed to develop without regard for its impact on Canadian social and cultural values, the economy and the quality of life in the country.

The Postal Service

Canada Post, which employs about 54,000 persons, is fully decentralized and is divided into four regions: Western, Ontario, Quebec and Atlantic. These four regions contain a total of 14 districts, each of which is organized to provide local customers with a service tailored to individual needs.

At the end of the 1973-74 fiscal year, 8,710 postal facilities were operating in Canada, consisting of 422 staff post offices, 1,854 semi-staff post offices, 3,725 revenue post offices, 2,308 sub post offices, 134 seasonal post offices, 299 postal stations and 28 letter carrier depots. Mail delivery by letter carrier was extended to an additional 280,838 points of call on 521 letter carrier routes. This brings the total number of points of call served by letter carrier to 5,083,024 on 11,159 full and 371 partial letter carrier routes. There are now 261 post offices providing letter carrier service.

The Assured Mail Program, launched in Toronto in February 1971, now operates in 66 cities. The program was expanded in April 1973 with the addition of an early evening deadline for local mail.

The postal code, which was first introduced in Ottawa in April 1971 and now includes all of Canada, contains enough information to identify an address of specific buildings, such as a large apartment or office building, or one side of a city street. In rural areas it indicates a specific post office which usually serves people living on nearby farms or in one or several small towns.

The first electronic equipment, capable of sorting about 26,000 letters into 288 compartments in an hour using the postal code, is processing mail at high speed in Ottawa, Winnipeg, Regina, Saskatoon, Edmonton, Calgary and Toronto. By 1978 it will have been installed in the 26 largest cities, which account for 85 per cent of the mail in Canada.

Since 1972 the Post Office has been engaged in the construction of large modernized postal plants for handling bulk mail and parcels, and for the mechanization of mail sorting. Two major units are nearing completion in Toronto and another two are well into the planning stage in Montreal. Major postal processing installations are either being planned or under construction in a number of other large centres. The new mail processing plants are only part of the most far-reaching improvement program the Post Office has ever undertaken—a program that will eventually affect every Canadian who mails or receives a letter.

Optical character reader equipment (OCR), capable of “reading” printed or type-written postal codes that currently have to be identified by a human operator, was installed in Ottawa at the end of 1974. It began operation in Toronto and Vancouver in 1975 and, by early 1977, it will also have been installed in Montreal and Winnipeg.

The philatelic services of the Post Office also continue to expand in response to public demand. In 1973-74, revenue from philatelic sales rose to \$5.3 million—an increase of 16 per cent over the record sales of 1972-73. Also during 1973-74, approximately 50 new philatelic counters were opened at major post offices across the country as part of the Department's program to make philatelic products and supplies more readily available to stamp collectors.

In addition, major improvements have been made in the frequency and quality of service to isolated or remote communities where mail transportation is normally provided by air. Emergency services are now provided by helicopter in several areas.

The National Postal Museum, located in Ottawa, and containing a fascinating collection of philatelic and historical items, opened in September 1974.

acknowledgements

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Bering Strait

Yukon River
Tanana
Pelly
Humboldt
Yukon (United States of America)

PACIFIC OCEAN

ARCTIC OCEAN

YUKON TERRITORY
Dawson
Mayo
Shack
Whitehorse
Pelly
Watson Lake
Lion

DISTRICT OF NORTHWEST
MACKENZIE
Great Bear Lake
Great Slave Lake
Yellowknife
Fort Franklin
Fort Norman
Norman Wells
Fort Good Hope
Aniakchik
Inuvik
Tuktoyaktuk

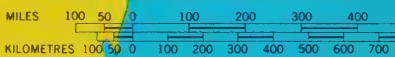
BRITISH COLUMBIA
Stewart
Prince Rupert
Kitimat
Sandy
Jedway
Ocean Falls
Port Hardy
Campbell River
Tofino
Alberni
Vancouver Island
Victoria
Seattle
Columbia
Fraser
Ramparts
Turner Valley
Chamberbrook
Spokane

ALBERTA
Peace River
Grande Prairie
Edmonton
North Battleford
South Battleford
Lethbridge
Medicine Hat
Regina
Estevan
Brandon
Winnipeg
Churchill
La Ronge
Flin Flon
The Pas
Gimli
Brandon
Winnipeg
Saskatchewan
Saskatoon
Prince Albert
Buffalo Narrows
Fort McMurray
Fort Vermilion
Fort Chipewyan
Uranium City
Stony Rapids
Wollaston Lake
Lynn Lake
Thompson
South Lake

UNITED STATES
Missouri River
Great Falls
Minot
Grand Forks
Fargo

Canada

SCALE 1:20,900,000 OR ONE INCH TO 330 MILES



Federal Capital **Provincial Capital**







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